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A PLEA FOR CLINICAL DIAGNOSIS IN PRESENT DAY MEDICINE*

URBAN MAES, M. D.

NEW ORLEANS

During my years as a teacher, it was one of my assignments to conduct a "Dry Clinic." The plan was to review the student's history and examination of a patient, to arrive at a probable diagnosis, and then to suggest measures for the cure or relief of the patient. Some of the old surgical texts referred to this study as "Surgical Diagnosis and Surgical Therapeutics."

I have seen patients whose diagnoses may be listed, for illustration purposes, as: gall bladder disease, certain stomach disorders, thyroid disease, or complications of diabetes. These patients would have first been on medical wards for a time, and would then have been transferred to surgical wards. The medical instructor, in too many cases, had not been familiar with surgical therapeutics. While there could not have always been a promise of complete cure, there would have been either a possibility of prolongation of life or relief of distressing symptoms. Closer correlation of the medical and surgical services would certainly have meant earlier relief. I am sure that if students were taught to evaluate patients as clinical entities, instead of as objects for laboratory study, quicker diagnosis and quicker relief would result.

The use of surgical therapeutics, as a means of helping the sick person, has not reached perfection by any means; it may be the best we have to offer at this time, and there should always be the urge to improve. To quote the late W. J. Mayo, "Tomorrow is the great day in medicine."

My thesis is: Let's make a more intimate study of the sick man or woman with God given faculties, possessed by all of us. I do not mean, in any sense, to belittle or underestimate the value of laboratory studies, but they should be used more as a "clinical science" to supplement and implement our "clinical sense."

When a student or an intern begins his story of a patient's illness with blood counts, hematocrit readings, urea clearance readings, etc., I know that he has not looked at the patient as a sick individual but as an object for study. One always feels that the sick man should be boiled in a test tube to see what reactions one can get, or that he should be sliced under a microtome to determine his histopathology. Would it not be better to call such men biologists and not physicians? The term physician not only implies that we should try to find out what is wrong with a patient, but to use the best means we have to cure him or, at least, to improve his condition. Even the hopelessly ill man can be given a measure of relief.

I can recall an incident that occurred some years ago when a patient of mine was not satisfied with my opinion; he insisted on consulting a distinguished internist in one of the Eastern centers. It took several days to complete various examinations that were made in many different laboratories. When the patient returned to me he brought with him many reports carefully typed and

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bound. There were twelve typed pages of data without a single conclusion. The man turned out to have had a solitary abscess of the liver—this had been suspected, and was confirmed by the exploring syringe. Proper treatment was instituted with complete recovery.

It is not my intention to condemn proper use of the laboratory in the study of disease or for arriving at proper conclusions as to what is wrong with a patient or what his treatment should be. My contention is with the approach to the study of the disease. I have suggested, on occasions, that a special period should be assigned to teach students the method of starting to get a history. How often do we hear a sick man asked, "What is the matter with you?" All too often he has read something in the lay press, or even in some medical journal; perhaps he has had an opinion, after a superficial examination, of another doctor. The patient will have some vague notion of what his trouble is, and he does not hesitate to give it to you. With the careless physician (and I am positive there are some) the patient may well be treated for what he himself says he has. I have seen such a person operated on for hemorrhoids when the patient had a carcinoma of the rectum. Here is where we may have our suspicions confirmed by the x-ray laboratory. I have frequently used the aphorism that "a finger in the rectum will give more information than a thermometer in the mouth." How often have we seen iodine in some form given in nontoxic thyroid disease? In the manner of approach to the sick individual, it might be well to imitate the great philosipher, Sir Berkley Moynihan. His paper on "Inaugural Symptoms" might well be read with profit to all of us. His very practical system was simply to let the patient tell the whole story about himself. That, plus the answers to a series of well directed questions by the examining physician, put him on the right track. I have often pondered over the right first question. After trying many different ones, I have finally concluded that for routine use I can ask simply, "How long have you been sick?" This will almost always open up a series of observations that will help in making a decision.

Having spent most of my medical life in clinical medicine, I may be somewhat prejudiced in my ideas about the training of present day medical students. It is my firm conviction that the future of medicine lies in the more scientific side. Undoubtedly, the physiologist, the biochemist, and the biologists will be responsible for the advances that are to be made. My plea is not, in any way, to have fewer of these sciences; my hope is to have them more useful in their application.

There are many diseases in which the laboratory—and the laboratory alone—can give us the information that is necessary for the final label to be placed on a patient's disease. It is certain that an estimate of what the patient can stand and what the outlook is, in many instances, can only be furnished by laboratory study. My plea is that we have a sick man to deal with, and he should have the benefit of thorough clinical study as well as the wise application of necessary laboratory data.

As a practicing surgeon, I might ask, "Who among us would care to undertake a serious operation without an accurate knowledge of the patient's organs?" It is such studies that have increased the application of surgical therapeutics in a more sane and safe way. Blood studies, kidney function, liver studies, all give information that have direct bearing on the prognosis. The x-ray has made the recognition of gastrointestinal malignancy operable in many instances, in which a marked prolongation of life or a complete cure may be expected. I have one patient today alive, twenty years after a gastrectomy for malignant disease, and this same patient is alive and well three years after a resection of her colon for a different type of carcinoma. All of this was made possible by early studies with x-rays. This patient's postoperative care was guided by laboratory studies of organic function.

In a classical address by Prof. John A.

Ryle, delivered at the Annual Meeting of the Medical Society of London (published in the *Lancet*, May 12, 1939) he illustrates the acumen of Sir William Gull. The surgical staff were concerned over the failure of a fracture to unite. During the discussion, Gull was passing through the hall, and his opinion was casually requested. Gull's only comment was, "Feed him tomatoes." His keen eye had noticed that the patient had the stigmata of scurvy. His advice was followed, and the fracture promptly united.

The late great Harvey Cushing once told me of an episode in a Boston hospital. The Chief of Medicine was on vacation, and some of the staff were in charge of the service; they were conferring about a patient with a continued fever. Numerous studies had been made, such as blood counts, blood chemistries, blood cultures. Many x-ray pictures had been taken; several electrocardiagrams had been made and checked, but no conclusions had been reached. A general practitioner, from a small neighboring community, happened in as a visitor, and was invited to make rounds with the staff. After listening to the history on the patient, with whom the entire staff was by now concerned, after hearing reports of the numerous laboratory studies, this country doctor looked at the patient's tongue, palpated an enlarged spleen, noticed some rose colored spots on the man's abdomen, and then casually turned to the staff and remarked, "I did not know there was any typhoid fever in this part of the country." I leave the consternation of the staff to your imagination. While certain laboratory data, correctly interpreted, would have helped, the clinical findings in this case were quite enough for a diagnosis. To those of us who are frequently reminded of the high cost of medical care we might well ponder this example.

I frequently wonder if it might not be good training to imitate the clinics of Joseph Bell of Edinburgh. You may recall that he was the inspiration for the great detective, Sherlock Holmes. Conan Doyle was one of Bell's students, and from his astute deductions, Doyle created that first and greatest character of detective fiction. Bell would have a patient walk through the room, or would have one observed for a brief period. He would then ask his students what they had discovered. A classmate of Conan Doyle's once told me that what Joseph Bell found out from those quick observations was uncanny. By a man's walk, one might conclude whether he had been a sailor, a soldier, or a civilian. By his color, or his expression, one can often (by the use of such simple facts) suspect what further investigations must be made. The cachectic patient, the emaciated individual, the arthritic, the anemic may all be recognized without much effort. One of my staff once made—and later confirmed—the diagnosis of Paget's disease by the simple statement from a patient that each time he bought a hat he had to get a larger size.

All of this is not meant to convey the idea that such a superficial examination should, under any consideration, be final. I mean to suggest that accurate observations with our own special senses, which God gave us to use, are not to be discarded.

The pure scientist may often say that clinical diagnosis is "guess work." Would that same scientist say that a sense of smell, a sense of hearing was "guess work"? John Ryle says, "Let us freely admit that some physicians, with a high endowment of clinical sense, are not wholly aware of the stages or processes of their judgment, or that they have lacked time or desire to investigate them. The fact remains that these judgments are the result of sensory habit and discipline."

Could it be the fault of those of us who have been teachers, those of us who are still teachers, that we are not giving the young physician a chance to recognize his "clinical sense"? Perhaps the fault lies in the college, or even in secondary education, where his school curriculum is "cut and dried;" there seems to be no place in it for exploration of his own. Perhaps our task should begin with the medical school curriculum where we would give the student an opportunity to develop an awareness of this clin-

ical sense. As he became an interne his curiosity would then be more easily aroused, and he would have learned the advantage of wanting to know. I do not, in any manner, want to suggest that intuitive diagnosis should be encouraged. As DaCosta has so aptly said, "Quick diagnoses are a frequent, and rapid method of arriving at a wrong conclusion."

Decisions often come as a result of long experience. Frequently conclusions cannot be explained, are not intentional, but simply the exercise of one's ability to observe, to remember, and to compare. How often do we hear, "This patient reminds me of one I saw once that turned out to have had such or such a condition"? This experience is the outgrowth of a retentive memory and a thorough knowledge of the pathologic possibilities. Sometimes I find it embarrassing to explain or make rules which would serve as a guide in arriving at a diagnosis. When seeing the person as a whole human being (not in a test tube) we frequently form certain conclusions which are difficult to explain. I repeat, a few well directed questions will often put us on the right track. This is the result of training and disciplining our special senses. We can recall the days when the fast disappearing, but useful, person—the family doctor—could walk into a room, and by some characteristic, but undescribable odor, and a look at a patient come to some "suspicion" of diagnosis. When pursued to the end, the right diagnosis would be gained. In some of the early monographs on yellow fever, we can recall that the odor, plus the appearance of the patient, was almost enough for a diagnosis.

In World War I, many of us became familiar with the odor of gas bacillus infections. We would walk into a ward and ask where the "gas case" was. I took pride in my ability to detect these infections until one day an incident served to "curb my bit." As a consulting surgeon near the front, I walked into a sorting station where there were some wounded Germans. I asked the sergeant in charge where his "gas case" was. He answered with a smile that there were no "gas cases". It happened that he had just removed a German's boots. Do you wonder that my pride was wounded?

I was trained in the narrow clinical school, and I am making the plea that the approach to learning about a patient should be clinical first with confirmation later by the laboratory. Palpation, auscultation, and percussion should not be abandoned. We need not always rely on the laboratory to be the superclinician to do all our thinking for us. Confirmation by the laboratory, when indicated, is always more accurate, but we dislike to see the older tried and true concept completely discarded. Isn't it to be assumed that the patient becomes less human if he is seen only through laboratory reports. And will the physician be as much of a human to the patient?

Sir Frederick Gowland Hopkins of Cambridge, during a medical address to the Royal Society in 1934, quoted the following line: "The older physicians, with minds undisturbed by a crowd of scientific facts, developed a clinical sense—*sui generis*—as subtle as the sense of taste or the sense of smell, and it was on this sense that the great school of English medicine was founded."

I sometime wonder if the development of some narrow specialties are not responsible for the change in medical teaching? My plea is: let's still use the art of true medicine and not become robots dependent entirely upon the sciences. By adhering to certain fundamentals we can become more independent; we can possibly cut down the high cost of medical care. Judicious use of the laboratory is indispensable; its abuse is conducive to mental laziness.

Medicine and surgery cannot be practiced by rule; there is not a mathematical formula that, in our profession, can take the place of knowledge and orderly thinking combined with experience.

It is, in my opinion, a great pity that the days of the preceptor are gone. A period of apprenticeship was of inestimable value to the professions. It is not my intention that we should look backward, but we could

well remember what has been tried and proved to have been good.

In concluding, may I remind you of the words of Frank Cook, Esq., from Guy's Hospital Gazette, October 1938. "In the practice of medicine you can only do one job at a time, whether you are a quick worker or slow. If the rest of the world seems to be pestering you with all its troubles, turn to it a blind eye and a deaf ear whenever you are applying your faculties to the art of diagnosis."

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RETROPUBIC PROSTATECTOMY*

EDGAR BURNS, M. D.†

NEW ORLEANS

The first reference to extravesical suprapubic removal of the prostate was made in 1909 by Van Stockum[1] of Rotterdam. Other reports describing procedures utilizing the same general principle were made by Otto Maier[2] of Innsbruck in 1924, and by Jacobs and Casper[3] in America in 1933. Having noticed for some time the excellent exposure of the prostate during the operation of cystoprostatectomy, Millin[4] in 1945 carried out a series of anatomic dissections with a view to performing suprapubic extravesical prostatectomy. He quickly appreciated the ease of the approach and in August 1945 performed his first retropubic prostatectomy. I was visiting him in London on the third anniversary of the performance of this first case, by which time he had performed the operation approximately 900 times. The technic developed and refined by him is now becoming popular in many medical centers throughout the world.

It seems important to emphasize that the retropubic operation is not a universal cure for all types of prostatic obstruction. Benign prostatic hyperplasia begins as a lesion composed of small spheroids beneath the mucosa of the prostatic urethra. As the adenoma develops, the normal prostatic tissue is compressed laterally against the fibrous anatomic capsule of the gland and forms a peripheral shell, or so called surgical capsule, from which the hypertrophied mass can be enucleated by blunt dissection. It is in this group of cases that the retropubic operation is especially well adapted.

In vesical neck obstructions which are due to fibrosis, that is, bars and contractures of the vesical neck, the prostate is not easily separated from its capsule and does not lend itself well to any type of open surgical procedure. This is also true of prostatic carcinoma which has invaded the capsule and periprostatic region. It is generally recognized that these patients should be treated by transurethral prostatic resection. Under good vision the prostatic urethra can be reconverted into a normal channel.

Prostatic carcinoma usually originates in the posterior lobe, although the lateral or median lobes may be primarily involved. It is probable, however, that 90 per cent or more of all cases of prostatic cancer originate in the part of the prostate which is not in apposition with the prostatic urethra. This accounts for the fact that the disease in its early stages produces no symptoms. A small nodule felt on rectal examination of the prostate of a man in the carcinomatous age should be suspected of being malignant, as it is only in this way that the condition will be discovered during this stage when prostatic cancer may possibly be cured by radical removal of the prostate with its capsule. Radical removal may be accomplished by either the retropubic or perineal route. A nodule felt on rectal examination is only presumptive evidence of carcinoma and should be confirmed by biopsy before radical removal is performed. Since the suspected area is in the posterior lobe, it is more accessible through a perineal approach. If biopsy proves that the nodule is inflammatory, the wound may be closed and only a simple operation has been performed. On the other hand, if radical retropubic prostatectomy is decided upon,

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†From the Department of Urology, Ochsner Clinic, and the Department of Surgery, Tulane University School of Medicine, New Orleans.

one must assume that the nodule is carcinomatous since the advantage of biopsy before removal is lost by the anterior approach.

If the retropubic operation is reserved for cases of true benign hypertrophy, as we believe at this time should be done, this approach appears to have a number of advantages over other methods for the removal of this type of obstruction. The approach is direct, is anatomically sound, and does not endanger or disturb other important organs. Since all obstructing tissue is removed, the risk of recurrence is eliminated.

It is not the purpose here to review in detail the technic of the operation, but certain technical considerations should be emphasized. The operation is done in a highly vascular area and careful attention to hemostasis is required. After the retropubic space has been exposed, the area is inspected for the presence of superficial veins to the prostatic capsule; attention must be given to such veins at this time or they will be torn in a later stage of the operation and give rise to troublesome bleeding. They should be seized with hemostats and divided and each hemostat touched with the coagulating current. These veins are thin-walled and do not lend themselves well to ligation. A transverse incision is next made in the capsule and oozing which comes from the cut margins is controlled by T forceps. A small artery is not infrequently seen spurting from near the middle of the upper flap; this is clamped and coagulated. After the adenoma has been enucleated, a wedge is removed from the vesical neck so that there is no elevation of the posterior lip. This was a factor in causing postoperative urinary retention in some of Millin's early cases. With the aid of the Millin suction tip, bleeding from the prostatic fossa is easily located and controlled under vision by either ligature or light coagulation. The capsular incision is next closed with a single layer of continuous chromic catgut sutures, which completes the hemostasis. Drainage is secured by a retention urethral catheter, which requires little attention after the first twenty-four hours. We have had no cases of postoperative or delayed hemorrhage. Of the 35 patients operated on by Millin during my visit to London, in only two cases was it necessary to irrigate the catheter during the postoperative period for removal of blood clots. Nothing else was required after the clots were removed. Convalescence following retropubic operation is more rapid and satisfactory than following any other type of operation for benign prostatic hypertrophy. We have had some of these patients leave the hospital completely healed with normal bladder function on the eighth postoperative day. The average duration of hospitalization is ten to fourteen days.

Associated lesions of the bladder do not necessarily constitute a contraindication to retropubic prostatectomy if the prostatic obstruction is the type which is amenable to this approach. Stones in the bladder may be removed through the incision in the prostatic capsule after enucleation has been completed. On the other hand, if for any reason it seems wise to open the bladder, one should not hesitate to do this. We recently encountered two cases of this type. The first case was a patient with multiple small stones in the bladder in addition to prostatic obstruction and it was felt that some fragments might be left if an attempt were made to remove them through the capsular incision. For this reason, the bladder was opened first and after the stones had been removed, the cystostomy opening was closed with a double layer of continuous catgut sutures and retropubic prostatectomy was then carried out in the usual manner. Convalescence was uneventful. The second case was a man of 78 years with cardiovascular disease, two stones in the left lower ureter partially obstructing the left kidney, two stones of unusual size in the bladder, and large benign prostatic hypertrophy. A lower midline abdominal incision was made and the stones were removed from the left ureter. The bladder was next opened for removal of the stones, which seemed too large to permit removal through the vesical neck. The

incision in the bladder was closed with a double layer of continuous catgut sutures after which retropubic prostatectomy was carried out. There was no significant change in blood pressure during the operation and convalescence was uneventful.

It would be absurd to state that any operation upon the prostate is completely free of complications. Osteitis pubis following retropubic prostatectomy has been reported. Millin has had 3 cases in his large series. Cases have been reported following transurethral resection as well as retropubic prostatectomy. Other cases have been encountered independent of operative procedures. The reason for this complication is not known. Postoperative hemorrhage is a possibility but rarely occurs. Drainage of urine through the wound may occur but is of little importance and always stops following the insertion of a retention urethral catheter. There are no persistent fistulae. Urethral stricture, so common after transurethal resection, is not encountered after retropubic prostatectomy any more than one would expect it to follow suprapubic enucleation. The reason for its absence is lack of trauma to the urethra.

SUMMARY

The retropubic approach offers a number of advantages over other methods for removal of prostatic obstruction produced by true benign hypertrophy. The approach is direct, is anatomically sound and does not endanger or disturb other important organs. It permits removal of all obstructing tissue, so that the possibility of recurrence is eliminated. Patients with poor renal and cardiac function appear to tolerate the retropubic operation better than any other type of total prostatectomy. Early ambulation is permitted and there is relatively little discomfort in the postoperative period. The end results of the operation are most gratifying.

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RETROPUBIC PROSTATECTOMY*

ROBERT K. WOMACK, M. D.
AND
BURDETT E. TRICHEL, M. D.
SHREVEFORT

During the past year considerable interest has been aroused among urologists over a new surgical approach to the prostate gland, namely retropubic prostatectomy. Although one finds an occasional reference in the literature to an extravesical suprapubic approach to the prostate, even dating back as early as 1909, it remained for Terence Millin of London, England, to place this surgical procedure on a sound basis and to popularize this method of prostatectomy.

Just why the early investigators abandoned this route is not clear, but in all probability postoperative sepsis played a prominent role in discouraging this procedure. Today, antibiotics, sulfonamides, improved surgical technics as well as improved instruments, especially catheters, have removed many of the previous difficulties and complications in any type of open surgery of the prostate gland.

Millin claims the following advantages for this procedure: (1.) It is an extravesical procedure, which avoids suprapubic bladder drainage and the risk of persistent fistula. (2.) It does not interfere with, or endanger, any important organs. (3.) It is relatively short, and relatively shock free. (4.) All the obstructing tissue is removed, minimizing the risk of recurrent obstruction. (5.) The postoperative course is, as a rule, very comfortable for the patient, and easy for the attending staff. (6.) Relatively short postoperative hospitalization. (7.) Extremely low mortality rate.

Needless to say, the preoperative preparation of the patient is the same as for any other type of prostatic surgery, namely

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*From the Department of Urology, Charity Hospital, Shreveport, La.

investigation of renal function, cardiovascular studies, etc.

In a recent publication Millin reports his experiences with 402 cases with a mortality rate of 4.75 per cent. In this country, Bacon reports on 32 cases with 1 death occurring postoperatively due to coronary occlusion, which was proved at autopsy. He concluded that this procedure is anatomically sound, there is little danger of postoperative hemorrhage, persistent fistula, prolonged infection or urethral stricture. He also states that it minimizes the danger of postoperative incontinence and impotence. He does not consider it applicable to prostatic fibrosis, bladder neck contracture, or extensive carcinoma.

Lowsley reports a series of 28 cases with no deaths. He concludes that this method of prostatectomy is possible in almost every type of prostatic obstruction, but is feasible in many cases of large adenomatous prostates, when the patient's general condition does not warrant a traumatizing operation, when a short period of hospitalization is a consideration and when the maintenance of sexual functions is to be considered. In his hands the results were most gratifying, as the convalescence was very rapid. There were no deaths, no persistent fistula and no postoperative incontinence of urine.

Grant reports a series of 65 cases without a death, and in comparing this method with the perineal prostatectomy his conclusions were as follows: (1.) The operation is more simple than the perineal. (2.) It is equally shock free. (3.) There is less wound discomfort. (4.) There is quicker healing, and shorter hospitalization. (5.) Less danger of incontinence and impotence. (6.) It is possible to perform radical prostatectomy in early carcinoma equally as well by this route as by the perineal.

Briefly, the technic of this procedure is as follows: Through a midline suprapubic incision the recti muscles are separated, the bladder is pushed backwards and the retropubic space is exposed. At this point the prostate, the vesicoprostatic junction, and the bladder can be easily identified. Usually one encounters one or more periprostatic veins in the loose areolar tissue overlying the prostate. These are ligated and divided. Inspection of the prostatic capsule will usually show one or more large capsular veins coursing through the substance of the prostatic capsule. These are underrun and ligated with chromic O. A transverse incision is then made through the capsule of the gland between the apex and the base. This incision should be made as short as possible, depending on the size of the adenoma, and extended through the capsule until the adenomatous tissue is recognized. By blunt dissection, either with curved scissors or with the finger, the hypertrophied lobes are enucleated, the urethra is cut across near the apex of the prostate and lifted up out of the prostatic bed. It is then dissected free from the overlying bladder mucosa around its base and removed under vision from the vesical orifice. Bleeding will usually be encountered from the branches of the cystic arteries on each posterolateral edge of the bladder neck. These are best controlled by a figure-of-eight or running suture of fine chromic. If the vesical orifice is contracted, a V-shaped wedge of tissue is removed from the posterior vesical lip. A catheter, preferably a Foley, size 20 or 22, is passed through the urethra where it can be seen emerging into the prostatic fossa, and guided into the bladder under vision. The balloon is inflated, the bladder is irrigated to remove clots, and the capsule of the prostate is then closed, using either interrupted or continuous suture of chromic O. A small rubber drain is placed in the retropubic space and the wound is closed in layers in the usual manner.

When the patient is returned to his bed, the catheter is connected to a receptacle and is not irrigated, unless it becomes occluded by clots. As a rule, the urine is blood tinged on the day of operation, but is usually clear by the second or third postoperative day. There is very little postoperative pain or discomfort, and the patient is allowed to be out of bed on the second postoperative day. The prevesical drain is removed in seventy-two hours, and

the catheter on the fifth, sixth or seventh day, depending upon the individual case. As a rule, there is no leakage of urine and the catheter can be safely removed in five days, sometimes sooner.

This presentation is based upon our observations in 31 cases, which have been done during the past six months at the Shreveport Charity Hospital. We have been impressed with the absence of shock, the smooth postoperative convalescence and the relatively easy postoperative care of the patient. There have been no deaths in this series. The average postoperative stay has been sixteen days. However, several of these patients could have been dismissed sooner, but were waiting on relatives to provide transportation to their homes in distant locations.

We believe this to be an ideal method of removing the medium-sized and fairly large hyperplasias. In our experience, prostates weighing under 20 grams have proved to be difficult to enucleate. We prefer the transurethral method in the small adenomas, fibrotic prostates, contractures of the vesical orifice and carcinoma of the prostate. There has been no case of persistent incontinence. One patient had a temporary diurnal incontinence, but this disappeared within four weeks.

THE TREATMENT OF ACUTE BRUCELLOSIS

T. B. TOOKE, JR., M. D.*
SHREVEPORT

Brucellosis belongs to that ever dwindling group of infectious diseases for which no specific therapeutic agent yet has been found. Until the discovery of the sulfonamides there was no drug or therapeutic plan which yielded encouraging results in any more than an occasional case. The era of chemotherapy and the antibiotics, beginning something more than a decade ago, has been marked by conflicting reports as to the efficacy of the various drugs used in the treatment of brucellosis but on the whole one can be encouraged even though success has been incomplete. Before proceeding with the discussion of these newer and apparently more effective drugs some of the older drugs and methods deserve mention.

*Department of Internal Medicine, Highland Clinic, Shreveport, La.

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OLDER TYPES OF THERAPY

Vaccine Therapy: For the most part Brucella vaccine has been reserved for the treatment of chronic cases of the disease. There is no unanimity of opinion that such a vaccine is specific for brucellosis. Carpenter and Boak[1] conclude that a specific effect is lacking and that favorable results are due to nonspecific systemic reactions. Evidence for this is that favorable results have followed the intravenous injection of typhoid vaccine. If used at all brucella vaccine should be used in combination with one of the more recent therapeutic agents for whatever increase in immune bodies it might bring about in the host.

Immune Serum: The use of specific antiserums prepared for immunizing animals has not been accompanied by very encouraging results. Human immune serum would appear to be of some value.[2] I have had no experience with it, but here again it would seem the best plan to use antiserum in combination with a more effective drug.

Fever therapy: Fever therapy by means of the hypertherm has been used and reported[3] to be of some value, particularly in cases complicated by bone or joint lesions.

CHEMOTHERAPY AND THE ANTIBIOTICS

Sulfonamides: Soon after the discovery and beginning clinical use of sulfanilamide, encouraging reports began to appear in the literature which indicated that brucellosis would respond to this drug.[4, 5, 6] On the other hand results have since been presented which tend greatly to minimize the value of the sulfonamides as a curative agent.[7, 8] However, as late as 1945, Spink and his associates[2] expressed the opinion that in their experience the sulfonamides were effective in the treatment of Brucella infections. In a later report Spink, *et al.*,[9]

obtained recovery in 6 out of a total of 20 cases treated with sulfadiazine alone.

Penicillin: Enthusiastic use of this drug in the treatment of brucellosis followed its discovery, but it has since been more or less universally agreed that penicillin is ineffective either alone or in combination with any other drug.

Streptomycin: This drug enjoyed a somewhat better reception from early investigators and it was at first thought to be quite effective, but it has failed to live up to these early expectations. In a group of 7 cases treated by Spink *et al.*,[9] with streptomycin alone recovery did not occur in a single case. As an example of the conflicting reports, however, Finch[10] has reported within the past several months that he "obtained excellent results in 6 cases treated with streptomycin alone." The weight of evidence indicates that streptomycin is not as effective used alone as is one of the sulfonamides.

Combined Sulfonamide - Streptomycin: According to very recent reports the combination of streptomycin and sulfadiazine appears to be the most specific and most effective method of treatment of brucellosis that has ben used up to the present time. The initial report of the use of this combination by Eisele and McCullough was that of a single well-controlled case that was apparently cured. Pulaski and Amspacker[12] report favorable results in 3 cases treated in a similar fashion. Spink *et al.*[9] have presented the most convincing results to date. In a group of 9 cases they observed very favorable results in all cases. The follow-up period of observation in the majority of these more recently reported cases, however, has been relatively short so that undue optimism should not be premature as it has been in regard to other forms of treatment.

The following group of 8 cases which I wish to present in brief summary have been, with one exception, treated with a sulfonamide compound alone or with sulfonamide in combination with Brucella vaccine. Streptomycin either was not discovered or was not readily available at the time that the majority of these cases occurred. All of these cases are examples of acute brucellosis, the one of longest duration being six weeks. Only 1 case showed demonstrable evidence of a complicating lesion and this case ended fatally. The diagnosis of all cases was made on the basis of the clinical picture, agglutination tests positive in quite high titers, and the exclusion of any other cause for the illness. The diagnoses were made without the aid of positive blood cultures. This test is admittedly the most valuable single diagnostic procedure when positive, but the technical difficulties of culturing the organism are great. According to Harris[13] the brucella organism is among the most difficult of all bacteria to isolate and unless a laboratory is staffed and equipped with special interest directed toward the isolation of this organism the diagnosis must be made without benefit of such definitive proof. On the other hand, if the agglutination test is positive in high dilution it can be accepted as proof of the diagnosis, particularly when the clinical findings are consistent with the diagnosis of this disease.

SUMMARY

Of seven cases treated with sulfonamides with or without vaccine 4 got prompt and permanent remissions. All received sulfanilamide. Two cases relapsed, one of which got second remission and has since been well. The other has not been followed enough to judge. One case treated with sulfadiazine and streptomycin must be considered a failure.

CONCLUSION

The sulfonamides particularly sulfanilamide appear to be of definite value in the treatment of acute burcellosis.

TREATMENT AND RESULTS IN EIGHT CASES OF ACUTE BRUCELLOSIS

	Age	Sex	Race	Duration Symptoms	Physical Findings	Agglutination Titer	Treatment	Results and Follow-up
Case 1 O. E. B. 7-29-43	50	M	W	6 wks.	Liver & spleen palpable	1:2000	Sulfanilamide 6 gms/day for 2 wks. followed by vaccine.	Prompt remission. No relapses in 5 yrs.
Case 2 W. B. 11-7-45	35	M	W	1 mon.	Spleen enlarged	1:6400 1:9600	Sulfanilamide 6 gms/day for 2 wks.	Prompt remission. No relapses in 3 yrs. Excellent health.
Case 3 J. W. G 10-7-47	55	M	W	3 wks.	Liver & spleen enlarged	1:3200 1:40,000	Sulfanilamide 6 gms/day 2 wks. Vaccine	Prompt remission. No relapse in 7 mon.
Case 4 J.B. S. 9-21-43	58	M	W	2 wks. (?)	Liver & spleen palpable and tender	1:8000 1:10,000	Sulfanilamide 6 gms/day. Discontinued after 8 days because patient left hospital	Prompt excellent remission. Relapse 6 wks. later. Patient developed paraplegia and expired after 5 wks. in spite of all treatment. Autopsy revealed transverse myelitis and pathologic lesion of myocardium ,liver spleen and testes, consistent with brucellosis.
Case 5 G. H. 8-14-46	25	M	W	5 to 6 wks.	Negative	1:640	Sulfanilamide 6 gms/day for 10 days	Prompt and complete remission. No relapses. Excellent health.
Case 6 K. B. 4-29-46	38	M	W	2 wks.	Negative	1:320 1:1600	Sulfadiazine 6 gms/day 2 wks. Vaccine	Remission. Relapsed 3 to 4 months later but got second remission and has remained well.
Case 7 J. M. C. 10-19-47	50	F	W	5 wks.	Negative	1.6400 1:8000	Sulfadiazine 14 days Vaccine	Remission, but relapsed in January 1948.
Case 8 A. C.M. 11-12-46	34	M	W	2 wks.	Negative	1:6400	Sulfadiazine 2 wks. Streptomycin 2 wks. overlapped 3-4 days	Never got complete remission. Follow-up unsatisfactory.

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CERTAIN PRACTICAL CONSIDERATIONS IN GASTROSCOPY*

CARL H. RABIN, M. D.

NEW ORLEANS

Some twenty years ago a distinguished English surgeon, one of the great cancer specialists of the world, said of esophagoscopy and gastroscopy that the physician who employed these aids to diagnosis must be endowed with the eye of a hawk and the instincts of a sword swallower. His remark was probably justified in a day when only rigid instruments were available. But in 1932 the flexible gastroscope was introduced, and gastroscopy promptly became the useful adjunct to the diagnosis of gastric lesions which gastroenterologists and other physicians had been trying to make it ever since 1868, when Kussmaul first endeavored to examine the stomach—of a sword-swallower — with a straight metal tube with flexible obturators.[1]

It is a far cry, of course, from gastroscopy as it was practised in 1932 to gastroscopy as it is practised today. The instruments used for the procedure have been successively improved and details of technic have been greatly simplified. More important, with increasing experience, the physicians who use this diagnostic aid have become increasingly expert in the interpretation of their observations. Over the last decade—a period which includes an interruption of five years of military service—I have myself performed more than a thousand gastroscopies, and I can testify to the difference in both technic and results which comes with experience.

INDICATIONS AND CONTRAINDICATIONS FOR GASTROSCOPY

In spite of the recent advances in gastroscopic technic and the growing appreciation of its value in the diagnosis of gastric lesions, numerous and widespread misconceptions still exist as to its place in the diagnostic armamentarium. The most common and most important of these misconceptions is the belief that gastroscopy is in competition with roentgenology. It is not. The two methods are complementary. One supplies information which the other does not, or one confirms the tentative or positive observations of the other, or one or the other stimulates the physician to further investigation.

Roentgenologic examination should always be performed before gastroscopy, for a number of reasons, one of the most important of which is to determine the configuration of, and other details concerning the esophagus which are essential before gastroscopy is undertaken. In institutions in which the two methods are regarded in the proper perspective, the situation is likely to develop which Benedict[2] commented on in a discussion of the set-up at Massachusetts General Hospital: The largest number of requests for gastroscopy came from the department of radiology.

If gastroscopy could be performed regularly as part of the diagnostic routine it would be highly desirable. It cannot, of course, if only because there are not enough trained gastroscopists to permit it. Gastroscopy is definitely indicated, however, and should not be omitted in (1) cases in which the question of medical versus surgical treatment has arisen; (2) cases of unexplained gastrointestinal hemorrhage; (3) cases in which roentgenologic studies have revealed no lesion but symptoms referable to the gastrointestinal tract persist; and (4) cases in which no organic basis can be found for gastrointestinal complaints or for unexplained loss of appetite or weight. Gastroscopy is also a useful method of confirming the roentgenologic diagnosis of gastric ulcer and gastric cancer, of following the healing process in a gastric ulcer, and of following the course of syphilitic disease of the stomach under specific therapy.

The chief contraindications for gastroscopy are picked up in the course of careful history-taking and careful physical examination. It is important, for instance, to

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*From the Department of Medicine of the School of Medicine of Louisiana State University.

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identify irregularities in the formation of the jaw or teeth and the presence of gaps between the teeth, to identify abnormalities and deformities of the spine, and to determine the existence of cardiac and cardiovascular abnormalities and hepatic enlargements. Fluoroscopy of the chest is essential in cases of suspected aneurysm or mediastinal tumor. Enlargements of the liver suggest the possible presence of varices of the esophagus. Other contraindications include all types of esophageal obstruction; angina pectoris, cardiac decompensation and other cardiac diseases; dyspnea; corrosive gastritis; abdominal rigidity and other evidences of peritoneal irritation; and the various psychoses. Some of these conditions constitute absolute contraindicaions to gastroscopy. Some of them are only relative. If they are relative, it is always necessary to weigh the possible risks of gastroscopy under the circumstances against the necessity for determining the exact intragastric status.

THE ROUTINE OF GASTROSCOPIC EXAMINATION

Gastroscopy is not technically difficult when once the method is mastered. Its mastery, however, implies careful and precise training and long experience. Furthermore, no matter what are the qualifications of the physician, gastroscopy cannot be properly carried out without unremitting attention to detail. With care the procedure can safely be carried out in the office but it is preferably performed in the hospital. The following routine is advised:

The examination is best carried out early in the morning. The patient is permitted nothing by mouth after midnight, and gastric lavage is done just before gastroscopy is performed, if roentgenologic examination has shown any gastric retention, or if the clinical history suggests an obstructive lesion.

Thirty to forty-five minutes before the examination, the patient is given morphine, gr. 1/6, and atropine, gr. 1/100, by hypodermic. It is important that he be completely relaxed and entirely free from apprehension, and sedation is employed routinely to achieve this status. I prefer to postpone an examination rather than carry it out on a nervous, apprehensive, unrelaxed patient.

Immediate preparation consists of two steps, abolition of the gag reflex and drainage of the stomach. The first objective is accomplished by painting or spraying the buccal and pharyngeal mucosa with pontocaine (2 per cent) or introducing the anesthetic agent through a special tube. Anesthetization, in addition to abolishing the gag reflex, does away with pain over pressure points in the mouth when the tube is passed. Drainage of the stomach is best accomplished by means of a Ewald tube. After it is passed, the patient is placed with the head lower than the stomach, in which position drainage is merely a matter of gravity. It is essential that the stomach be completely empty. The presence of even insignificant secretions over the surface of a lesion may give rise to misleading conclusions.

The gastroscope is passed with the patient in the left lateral position. The end of the instrument is introduced into the mouth and is guided by the left index finger until the tip touches the posterior wall of the pharynx. It is then pushed forward while the patient goes through the motions of swallowing. If it has been properly introduced, it passes easily beyond the inferior constrictor muscle of the pharynx as the muscle relaxes during the act of swallowing. It then enters the esophagus and within a matter of three seconds thereafter the tip is in the lowermost part of the stomach. All maneuvers should be gentle and exact, but there should be no undue delays. If there are, the muscular ring of the esophagus and the muscularis propria of the stomach will be given time to become tetanically contracted and a satisfactory examination will be impossible. If resistance is felt when the instrument approaches the cardia, it must be withdrawn at once, and, generally speaking, it should not be reintroduced until the roentgenograms have been restudied and esophagoscopy has been performed.

When the gastroscope has been satisfac-

torily inserted, the electric current is switched on, air is slowly introduced into the stomach, and examination of all parts of the gastric wall is carried out in a systematic manner. Examination of all parts of the stomach can be carried out under direct vision, with the exception of the three so-called blind spots. One of these is a small portion of the posterior wall, against which the gastroscope lies, making distention with air impossible. The second, and far more important, is the lesser curvature of the antrum, which, because of the angulus, cannot be properly visualized. The third blind area is a small portion of the fundus. The physician who undertakes gastroscopy must never forget the existence of these blind spots in either his technic or his interpretation of his observations.

GASTROSCOPIC OBSERVATIONS

The gastroscopist must, of course, be thoroughly familiar with the gastroscopic appearance of the normal stomach. Its mucosa is orange-red, smooth, and glistening. It has the appearance of silk and it presents many small highlights. Numerous intersecting and parallel folds are seen.

It would be impossible within the limits of this presentation to describe adequately the gastroscopic appearance of the various gastric lesions, but certain important points concerning them may be mentioned:

A benign gastric ulcer stands out as a contrasting white or yellowish-white area in the normal orange-red field of the gastric mucosa. The shape is usually round but may be elliptical. The edges are sharp. A benign gastric ulcer never blends with surrounding mucosa. The floor is always depressed. The ulcer is characteristically craterlike; less often it is funnel-shaped. Its depth varies.

A gastric cancer may present four gastroscopic appearances:

1. The polypoid type of cancer, to which the papillomatous type also belongs, has a broad base which supports numerous prominent, solid, hemispherical elevations of various sizes. The edges of the growth are sharply limited. The color is generally the same orange-red as that of the normal surrounding gastric mucosa. A polypoid carcinoma in the late stages is characterized by shallow ulcerations.

2. The non-infiltrating carcinomatous ulcer is usually large and usually has raised margins of variable thickness which do not seem to extend into the adjacent tissue. The color of the margins is usually dark red, so dark that the adjacent orange-red normal mucosa appears pale by contrast. The floor of the ulcer is extremely irregular. It is likely to be covered by bits of necrotic tissue and it may be dirty-gray, greenish-gray, brown, reddish or violet.

3. The infiltrative carcinomatous ulcer lies in the center of a distinct elevation. The floor, though it may be of many colors, is most often whitish or brilliant white. The ulceration blends into the surrounding mucosa, which is evidently infiltrated.

4. The diffuse infiltrating type of carcinoma assumes two forms. One is that of the so-called leather bottle stomach, the existence of which should always be suspected when the stomach cannot be satisfactorily inflated. The second type is the scirrhous or medullary type, which is easy to diagnose when ulceration has occurred but difficult when it has not. Early malignant infiltration can be recognized only by localized rigidity of contour or by the presence of an area of mucosa over which peristalsis is absent. Careful fluoroscopic examination is essential for early diagnosis. The gastroscope cannot be relied on early in the disease because involvement of the mucosa is not an early development.

Gastroscopy probably has its greatest field of usefulness in the diagnosis of gastritis, which cannot be accurately identified by any other method. Jones'[3] warning, however, should be borne in mind, that the term gastritis is not used by all gastroscopists with equal accuracy and understanding.

Gastroscopic observations indicate that there are four chief types of gastritis:

1. Chronic superficial gastritis, manifested by reddening of mucosa, edema of the mucosa, and increase of the normal gastric highlights. Exudation is character-

istic, and dirty-gray, adhesive, semipurulent mucus is the rule. Approximately 20 per cent of all cases of superficial gastritis go on to atrophic gastritis.

2. Chronic atrophic gastritis, which may be localized or diffuse. In this variety of disease the mucosa is thin, gray or greenish-gray and is so thinned out that blood vessels are sometimes visible beneath it. Atrophic gastritis usually accompanies pernicious anemia and is so uniformly associated with carcinoma of the stomach that it is best to regard it as a premalignant lesion.

3. Chronic hypertrophic gastritis. In this type of disease the mucosa is velvety and the normal highlights are diminished or are completely absent. Pathologic changes are first apparent between the mucosal folds, but eventually the entire mucosa has a segmented cobblestone or granular appearance. In advanced, severe cases it is hemorrhagic.

4. Postoperative gastritis may appear in any combination of the forms just described.

Benign tumors of the stomach, of which the most frequent are polyps and fibromyomas, may be the cause of profuse gastric hemorrhage. Both varieties are frequently associated with atrophic gastritis. A gastric polyp is a premalignant lesion and its demonstration in a roentgenogram should be regarded as an indication for immediate gastroscopy and for surgical exploration if the differentiation between malignancy and benignancy cannot be made definitely and promptly.

Certain other points of technic and interpretation might be briefly mentioned. Distention of the stomach with air is of considerable value in the differentiation between gastritis and carcinoma: An area which is the site of gastritis will flatten out as distention occurs, but a carcinomatous lesion will not. Palpation of the stomach during gastroscopy, just as during fluoroscopy, may bring a hitherto unseen lesion into view and indicate whether it is rigid or pliable. If after the gastroscope has entered the stomach it advances with difficulty, the presence of a neoplasm of some sort should immediately suggest itself.

Benedict's[2, 4] interesting studies of proved gastric lesions diagnosed by roentgenologic and gastroscopic methods indicate that both methods are more accurate in carcinoma than in ulcer, one reason being that in gastric ulcer, whenever there is doubt as to the character of the lesion, both radiologist and gastroscopist prefer—quite wisely—to err on the side of gastric carcinoma. Benedict also notes that while the gastroscopic diagnosis of carcinoma has improved as time has passed, the diagnosis of ulcer has not materially improved. One reason is that mechanical improvements in the instrument have not been of great help in the visualization of the lesser curvature of the antrum and the prepyloric area, where many small ulcers occur. Benedict calls attention to the instrument devised by Hermon Taylor, which permits proximal control of the flexible part of the gastroscope and which his own experience has shown to be most useful in visualizing lesions high on the lesser curvature and the posterior wall. This instrument is only just coming into general use in this country.

Generally speaking, the gastroscope supplies a better picture of mucosal changes and superficial ulcerations than does the x-ray. It is of particular value, as Schindler[5] has recently emphasized, in the diagnosis of small, early, symptomless gastric cancers, the most favorable of all cancers from the standpoint of resection and the most hopeful from the prognostic standpoint. Penetrating ulcer craters, however, located on the lesser curvature of the antrum, cannot be seen by the gastroscope and must be diagnosed by roentgenologic methods.

SUMMARY

Gastroscopy is now an established method in the diagnosis of gastric lesions. It is complementary to roentgenography of the stomach, not competitive. It is contraindicated under certain conditions and should be performed in their presence only when the possible risk is fully realized. It is of particular value in the diagnosis of

gastric ulcers, gastric cancers, and benign gastric tumors, and it is indispensable in the diagnosis of gastritis. Gastroscopy is an extremely useful diagnostic aid, but its mastery requires precise training, much experience, and unremitting attention to details.

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HERPES ZOSTER THERAPY: PAIN RELIEF BY SIMPLE PROCEDURE

GEORGE F. FASTING, M. D.

NEW ORLEANS

The literature on herpes zoster in the past decade reveals essentially no progress in our knowledge of its etiology and pathology. The causative agent is presumed to be a filterable virus, localizing particularly in the sensory ganglia of afflicted areas. The work of Goodpasture[1] suggests that the involved epithelial cells may also harbor the virus. Interference with vision is notable in the ophthalmic forms of this disease, and the possibility of attack on motor nerves is suggested from concurrent muscular paralysis in a few cases.

The report by Gundersen[2] on the use of convalescent serum for cases with herpes zoster ophthalmicus may in time contribute to our immunological understanding of this disease, apart from its merits in relieving pain and promoting healing in the eye.

In the treatment of herpes zoster the main interest appears to be directed toward control of pain. When skin areas involved are small, this aim is probably adequately met by a great variety of medicaments.

For larger areas the sedatives and opiates do not fill the need. When roentgen rays are used to appropriate skin and spinal areas, relief, if obtained, is not likely to appear before a lapse of twenty hours. The discovery that the small and daily administration of posterior pituitrin could give prompt and dramatic relief of pain has been verified to occur in a relatively small percentage of cases. As a result the administration of pituitrin is widely resorted to, only to provide much disillusion.

In 1945 and 1946 there appeared two interesting reports on the use of procaine block of the paravertebral sympathetic ganglia. The reports of Findley and Patzer,[3] and by Lowell,[4] claim the procedure to be simple and harmless, even to making "all other methods obsolete."

The simple procedure for the relief of pain in herpes zoster reported in this paper is the result of clinical studies with carbon tetrachloride applied topically to skin areas suffering from pain and pruritis under a variety of pathological conditions. (Fasting[5])

The procedure in herpes zoster consists in sponging off the afflicted skin area with a small amount of carbon tetrachloride (commercial) using a cotton sponge preferably to gauze or other material.

All other forms of therapy that aim to treat vesicles and pustules are minimized, and may even be dispensed with. It will be observed also that the "dry cleaning" process with carbon tetrachloride introduces a relative "dessication" and disinfection of the skin peculiar to lipoid solvents.

REPORT OF CASES

Prompt relief from pruritis was first observed in two cases having a limited involvement over the iliac crest and adjoining groin. The vesicles had already reached the stage of encrustation, but pruritis was continuous and only annoying. Both patients were furnished with a few ounces of carbon tetrachloride to repeat the applications as needed.

A case of herpes zoster on the leg of a white male was similarly treated with sat-

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isfaction by a collaborating physician.[6]

In a fourth case a soldier in one of the camps was similarly treated by an army medical officer who had observed the treatment and results in one of the patients in Charity Hospital listed below.

Colored female, E. F., age 58, entered Charity Hospital clinic on June 1, 1945. For two weeks there had been pain in the right arm and right side of thorax. A week before entry vesicles appeared on the same arm, the upper side of chest and over the right scapula. Pain became progressively worse. The clinic diagnosis was herpes zoster of entire right arm and part of thorax. While in the clinic and in the presence of physicians, the patient's afflicted parts were sponged off with carbon tetrachloride, a total of 1 ounce being used. Relief of pain was instantaneous. The patient was admitted to the hospital with instructions for the application of carbon tetrachloride every four hours or as needed for the pain. A fever of 101° F. on admission had disappeared the next day. The record indicates a return of pain at times and that reapplication of carbon tetrachloride relieved same. The patient was discharged four days later. She reappeared at the clinic in the following months of July and August. The notes indicate a little pain in the remnant scars of herpes zoster. Two years later she returned to clinic complaining of asthma and possible sciatic pain.

Colored female, M. G., age 50, entered Charity Hospital clinic March 16, 1945. Three weeks prior to entry patient noted blisters on left side of chest. Area was painful and pain continuous. Blisters kept increasing in number and no medication had been used. Physical examination appeared essentially negative, except for a mass of vesicles forming a 4 to 5 cm. wide band extending from the spinal column to the sternum over the middle of the left side of the thorax. While in the clinic the area was sponged off with carbon tetrachloride and immediate relief of pain resulted. This took place at 10:30 a. m. The patient was placed in the ward for further observation. Pain reappeared at 1:00 P. M., but was not treated until 4:00 P. M., when immediate relief was obtained with carbon tetrachloride. At 5:00 P. M. pain reappeared, this was treated at 6:00 P. M. Two additional applications were made at 7:30 and 9:00 P. M.

The next day, March 17, 1945, treatment was given at 10:30 a. m. on complaint of pain. Apparently no further treatments were given that day or night.

The following three days carbon tetrachloride was administered as a routine in the morning. Four days after entry the order for carbon tetrachloride was arbitrarily changed to calamine lotion by a resident. Two applications were made and the patient was discharged to the clinic.

Three weeks later the patient appeared in the clinic. The vesicles were dry and the patient had no pain. Further course appears of no consequence.

COMMENTS

Carbon tetrachloride is a fat and lipoid solvent resembling chloroform in anesthetic and toxic properties. It seems fair to assume that the relief of pain obtained in these patients resulted from a direct action of carbon tetrachloride on the peripheral nerve endings. While a certain cooling effect was obtained from the rapid evaporation, it is difficult to credit this action with significant anodyne effect.

Admittedly a larger series of patients must be studied. It will be equally necessary to consider the different regions of the body and complicating factors to properly evaluate this procedure. To gain a better understanding of the action of local anesthesia, recall to mind that the topical application of known anesthetics is not likely to exert any significant anodyne action on normal skin but does so under pathological conditions, i.e., nupercaine ointment in sunburn.

It seems appropriate to call attention to a few other properties of carbon tetrachloride. It does not cause blistering of the skin. This is a contrast to chloroform. As a noninflammable and non-explosive solvent, heavier than air, it has advantages over ether and benzene for cleaning the skin, removing adhesive, and acting as a disinfectant.

A few individuals will be found skin sensitive to this solvent. According to certain statistics in industrial dermatoses, this percentage is as small as that found for gasoline and other petroleum products.[8]

A consideration of the use of carbon tetrachloride should take into account the literature pertaining to its toxicity. By far the largest majority of toxic cases are the result of protracted inhalation of the fumes in closed rooms. Flagrant violations of simple precautions for handling industrial solvents have been found responsible for this condition.

The remaining reports of toxicity appear due to accidental ingestion of amounts larger than the prescribed therapeutic

doses. Not a single case of carbon tetrachloride poisoning has been encountered in the literature, where dermal penetration was the exclusive mode of entry or contact.

In the two cases of herpes zoster that were hospitalized for reasons of observation and records, it was found that 1 ounce of carbon tetrachloride sufficed for the rapid sponging of an entire arm and the adjoining pectoral and scapular surfaces. That the largest part of the carbon tetrachloride evaporated would seem obvious. Apparently only a small amount of the solvent need make intimate contact with nerve endings and other absorptive structures of the skin for adequate clinical response. Only further investigation can disclose if some modification in applying the solvent can reduce the waste and remain equally effective.

It is well to give consideration to the cost of medication employed. Carbon tetrachloride U.S.P. is carried in small amounts by druggists and its cost is high. The commercial grade of carbon tetrachloride as used in dry cleaning and in certain types of fire extinguishers is reasonably priced and is safe for external use. Druggists should be encouraged to stock the commercial grades.

The simplicity of this method, combined with the features of cleansing and antisepsis, should be an inducement to try carbon tetrachloride as a first step in the treatment of herpes zoster. It in no way precludes or interferes with any other form of therapy the physician may choose should the objective of pain relief fail or prove inadequate.

CONCLUSION

Carbon tetrachloride deserves trial for the relief of pain in herpes zoster. Only small amounts are required for sponging off afflicted areas. Danger of toxicity is not warranted when the solution is dispensed in small amounts and used with the conventional precautions.

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OFFICE FLUOROSCOPY*

D. M. MOORE, M. D.

MONROE

This writer was asked to prepare a paper on this subject that would benefit the many men who have some type of x-ray equipment in their office and expect to use it to some advantage in the handling of the every day run of patients in their practice. When used properly such equipment may be of great value, but many are not versed in its use and fail to get all that is expected from it. We hope to give you some helpful suggestions as to its use but we do not intend this as a postgraduate course in a very highly technical specialty.

By way of warning, an x-ray machine is a potential source of danger both to the operator and the patient. The production of useful x-rays begins at about 25,000 volts of electricity—a deadly current if not properly controlled. Many men have paid with their lives either through ignorance in the use of x-ray or through accident. A voltage up to 100,000 volts is commonly used to penetrate an average human body; such a voltage is likewise used in skin or superficial therapy. The flow of current through the tube is measured in milliamperes, usually 5 to 7 depending on the preference of the operator. This will deliver approximately 30 to 50 roentgen units to the skin per minute and an erythema dose will be administered in from ten to fifteen minutes total time. The operator's hands may be exposed as well as the body

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of the patient. The patient may get a disagreeable reaction but the operator by repeated exposures may receive severe damage to not only his hands but his body as well. You probably invested several thousand dollars in this machine and it may be well to invest a few more dollars in protecting gloves, aprons, goggles, etc.

Many doctors tell me that they can not see anything under the fluoroscope. This is because they have not properly prepared their eyes for it. The operator should invest in a pair of good fluoroscopic goggles and put them on ten or fifteen minutes before examining a patient, or sit in the dark room for a similar period of time to get the proper eye accommodation to darkness. This is very essential if you expect to see the changes flashed on the screen. Do not step on the switch and hold it for long periods of time, as you will soon use up your time limit and at the same time overheat the tube. Take a rapid survey and contemplate in the dark for a few moments on what you saw, then another brief flash to confirm or rule out what you first thought you saw. If you are reducing a fracture, note what is to be done and do it in the dark then recheck and thus get the desired results with a minimum of exposure. If you are searching for a foreign body set your voltage to correspond to the thickness of the part and use the shutters to confine the rays to the area under investigation. If the body is small this is very essential or the particle may be overlooked.

Possibly the most valuable use for the fluoroscope is that of inspecting chests. A normal chest on an individual of medium build should show brilliantly illuminated lung fields on each side of the chest, slightly increased on deep inhalation along with increased size of the lung fields. At the end of expiration the patient is instructed to cough without another inhalation. This should produce what is known as the "cough flash" and indicates normal lung tissues as a general rule. Note the mobility of the diaphragm during deep respiration; pleural fixation or phrenic nerve paralysis will limit the excursions on the affected side. Look for fluid levels with the patient in the upright position usually, or if too ill to stand, have him lie on the good side and inspect in that position. Consolidation of a lobe will show a dense or dark shadowing. Bronchopneumonia may be seen in or about the hilar region possibly on both sides. Shadowing in the apex may be one of several conditions such as tuberculosis, pneumonia, tumor or pocketing of pus. Under no circumstance label a patient as tuberculous simply because you see a shadow in the chest. A good diagnostic plate is essential for a differential study and the proper determination of the condition present. A pulsating mass may be seen and it is necessary to determine whether the pulsation is in all directions, such as is the case with aneurism, or is due to the impact of the heart or great vessels on a more or less solid mass giving it the appearance of pulsation.

Another important feature of a fluoroscopic examination is that of displacement of organs or other structures out of their normal position. It is well to remember that an organ may be pushed or pulled out of its normal position. An expanding mass of tumor or fluid may push an organ, while a fibrosing process with its inevitable contractions may pull an organ out of position. For instance take the position of the heart; do not spend all of your time looking for a pushing process but inspect the opposite side for a pulling process.

Rotation of the patient while under fluoroscopic observation is another device that pays good dividends when properly used. A pocket of pus in the pleura is a good example of this. The shadow observed will change as the patient is rotated and its direction will tell you whether it is near the screen or near the table. Keep in mind a turning wagon wheel and if you turn the patient to the right and the shadow travels to the left it is in the back side of the chest and vice versa, and if the pocket is on the front side of the chest it will move in the direction of the rotation. This is well to remember while locating a foreign body. Also, when the foreign body approaches nearest the skin surface a lead pencil should

be pressed on the skin perpendicularly to the rays and moved to adjacent points until the maximum amount of motion of the foreign body is observed. You will then be in position to make a mark on the skin directly over the foreign body at the point it is nearest the skin surface. The surgeon can, in many instances, cut down on the body and remove it without further assistance. If he fails to locate the foreign body after diligent search, a forcep can be inserted into the incision to grasp the object under fluoroscopic guidance and removed after lights are turned back on.

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THE NONSURGICAL TREATMENT OF SQUINT

WALTER S. STEVENSON, M. D.

QUINCY, ILLINOIS

For the purposes of this discussion, which will be limited to the nonparalytic, manifest types, a squint (strabismus) may be defined as any deviation of the eyes from parallelism, for either near or distance vision, which is manifest to an observer.

Certain other definitions and classifications are necessary at the beginning of such a discussion. Manifest squints are divided into the horizontal and the vertical types. In the horizontal variety one or both eyes turn inward or one or both eyes turn outward. In the vertical types one or both eyes turn up or down. All manifest squints are termed tropias. Internal deviations, which are also known as crossed eyes or internal strabismus, are termed esotropias. External deviations, which are also known as cocked eyes, wall eyes or external strabismus, are termed exotropias. The type of squint in which one eye or the other deviates upward or downward is termed hypertropia or hypotropia.

A nonmanifest squint, which technically speaking is termed phoria, differs from the manifest type of squint only in the fact that it is not manifest. There is the same tendency in a phoria as in a manifest squint or tropia for the eyes to deviate from parallelism, but the patient is able, by voluntary effort, to keep the visual axes parallel. Esophoria, exophoria, hyperphoria and hypophoria have the same meanings as the corresponding terms esotropia, exotropia, hypertropia and hypotropia have in manifest squints.

Many adults, and even many children, present themselves to the ophthalmologist with eyes which have become permanently squinted because of neglect. Squints of this kind are often extremely difficult to correct because permanent changes have taken place in the muscles of the deviating eye, such as contractures, hypertrophies, and even permanent fixation. Moreover, eyes which have squinted too long are likely to develop what is known as anomalous correspondence, which simply means that the retinas do not receive visual impressions on corresponding points. A false macula may develop from anomalous correspondence.

THE RESPONSIBILITY FOR NEGLECTED SQUINTS

You have already heard Dr. Gailey emphasize the ignorance and misunderstanding which surrounds the whole subject of squint. I want merely to corroborate what he says. The parents of a child with a squint, or, for that matter, adult patients, most often present themselves to the ophthalmologist because of the cosmetic defect. There is a general failure to realize a most important physiologic fact, that, with few exceptions the squinting eye is also defective in vision.

For this ignorance, as Dr. Gailey has pointed out, the medical profession is largely to blame. Far more often than is pleasant to remember the general practitioner or the pediatrician is not aware of the importance of early treatment of squint and recommends postponement of treatment, or even of consultation with an ophthalmologist, until the child is of school age. Ophthalmologists themselves are not free from blame. If the ophthalmologist consulted is not capable of handling the case, he should refer the child to someone who is. Most reprehensible is the postponement of treatment on the ground that the child will out-

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grow the condition. Occasionally he may, but such rare instances do not justify the giving of poor advice.

Recently what is termed psychosomatic medicine has received a great deal of attention, as it should, for in the treatment of many patients it is extremely important. The ophthalmologist must bear it in mind just as well as other physicians. He is treating the eye, it is true, but he is also treating the patient, and many times he is also treating the parents.

CAUSES OF SQUINT

Most squints are the result of faulty function of the muscles which move the eye to the right or to the left. They may also be caused by dysfunction of other muscles which move the eye up and down and in other directions, but the usual squint is the result of dysfunction of the muscles which act horizontally. These muscles, in contradistinction to other ocular muscles, have a single function, to move the eyes to the right or to the left. When their function is disturbed, horizontal squint occurs.

Muscular dysfunction is the basic cause of squint. Eyes deviate, however, or have a tendency to deviate, from parallelism for a number of different causes. The muscle itself may be weak congenitally, or weak because of abnormal postural tone. The same condition may be the result of illness, general weakness, various kinds of anemia, nervous debilities, and similar causes. In such cases, when the patient is in good health no trouble is likely to be experienced, but when the health is below par, the ocular deviation becomes manifest. The child who presents periodic squints belongs in this category; the parents, upon inquiry, will usually state that the abnormality is never noticed unless the child is tired, nervous or otherwise upset.

A second cause of squint is faulty anatomic arrangement of the ocular muscles, or abnormal configuration of the orbits. Faulty innervation of the muscles may also be responsible. Errors of refraction underlie other cases. Often the beginning of a squint can be traced to foci of infection, a serious illness, a nervous shock such as would be produced by a fall from bed, or some similar specific cause.

AMBLYOPIA

Every movement of the eyes is controlled by one or more of the six muscles in each eye, or of the twelve muscles in both eyes. The coordinated action of these twelve muscles makes it possible for the image of an object to be placed on corresponding portions of the retinas of the two eyes. If there be any deviation from exact correspondence, the individual is immediately conscious of double vision. This can readily be demonstrated. If pressure is so applied to the eye as to move the visual axis from side to side, two objects will be perceived and diplopia will result. This is a state of affairs which the brain will not tolerate however, and what is known as suppressed vision of one object or the other takes place. As vision is repeatedly suppressed, suppression becomes chronic and what is known as amblyopia ex anopsia develops. Chronic suppression, as will be pointed out later, is important in the nonsurgical treatment of squint.

Amblyopia merely means diminished vision. It is, however, of two types, true amblyopia and the type just mentioned, which develops as the result of suppression of vision. In the child, just as in the adult, double vision develops when a squint appears; the brain will not tolerate double vision; the image received by the brain from the corresponding point of the retina and the macula in the squinting eye is suppressed, and single vision is retained. Patients prefer single vision and they cannot obtain it from a squinting eye. The macular impression is therefore suppressed and the patient has single vision with the nondeviated eye.

True amblyopia responds poorly to any type of treatment or does not respond at all. The suppressive variety, on the other hand, responds relatively rapidly to patching, atropinization or amblyoscopic training. This is what might be expected. True amblyopia is the result of degeneration of cells in the geniculate body because of lack

of stimulation of the cells in that area over a long period of time by impressions received by the true macula. In the suppressive type of amblyopia the visual impressions reach their final destination through normal subcortical areas and it will respond well to exercises if the patient is seen early enough. Early training, however, is most essential.

PATCHING

The treatment of amblyopia is one of the first, and probably one of the most important, steps in the nonsurgical treatment of squint. In a very young child, whose squint is not of the alternating type, the use of atropine in the nondeviating eye often converts a non-alternating squint into the alternating type. In the great majority of cases an alternating squint is not associated with a marked reduction of vision in either eye. In an older child with a squint of the non-alternating type and reduced vision in one eye, patching is the treatment of choice to improve the vision in the poorer eye.

The use of patching is not as simple as it might seem. Ophthalmologists differ widely in their use of this method, which is unfortunate. Methods should differ, it is true, but not from ophthalmologist to ophthalmologist. They should differ from patient to patient, the method and the duration of treatment being varied to suit the individual patient, his individual characteristics, and, frequently, the family circumstances. Relevant family circumstances include not only the intelligence of the parents but the economic status of the family, the number of children, and their interest in all their children as well as their interest in the child with the squint.

In the usual case patching is probably best carried out by total occlusion of the nonsquinting eye with the ordinary type of eye patch secured by an adequate amount of adhesive tape. To be successful, it should be a twenty-four hour procedure, though this is often impossible, particularly at the start of treatment with some children. Often it is necessary to begin treatment with occlusion only for a short period each day, particularly in a child with marked reduction in vision in the squinting eye. The younger the child, the more vigorously and more actively may treatment be instituted. On the other hand, it is unfortunate that the great majority of children with squints are not seen until they are in the preschool or early school age. At this time patching is not practical from the standpoint of safety in play and at school; it is bitterly resented by the child, and if it is begun later than the first grade, it is likely to affect the school work.

If the child and his parents have co-operated reasonably well, there should be considerable increase in vision at the end of thirty to forty-five days after the beginning of treatment. If improvement of this degree has not occurred by this time, further patching is unlikely to be of value, though again the duration of treatment must depend upon the circumstances of the individual case. The method must be used with common sense and must be discontinued if it seems to be harming the child's personality. To my mind, it is better to have a child with amblyopia who is normally developed emotionally than to have a less serious reduction in vision in a child with many severe fixed complexes resulting from prolonged, rigidly enforced occlusion of the good eye.

Another consideration in determining the length of treatment should be the co-operation of the child. The degree to which some children go to avoid occlusion of the good eye is remarkable. They will peep over occluders placed on their glasses. They will remove a portion of an occluding dressing and peep through the hole they have made. These and other things they will do with no detection from the parents. I remember in my own practice a five-year-old boy who vigorously resisted patching for a long time. Then, according to his parents, he suddenly became tolerant of the occlusion. Examination showed why: He had discovered that he could remove the patch, make a small hole in the center, replace it, see all he wanted to see, and yet remain in the good graces of his parents.

In cases of this sort, if there has not been appreciable or rapid improvement in vision, it is useless to continue occlusion.

THE CORRECTION OF REFRACTIVE ERRORS

In external squints which are the result of nearsightedness, the correction of the refractive error, which stimulates convergence, is, of course indicated. Otherwise, in my opinion, the treatment of squints of this origin is entirely surgical, with one exception: If unilateral amblyopia should be present, patching and some type of exercise may convert a unilateral squint into an alternating external squint, the correction of which is more likely to produce fusion and binocular single vision. It must be admitted that after the proper surgical correction of external squints, the tendency to squint may still exist. In such cases, exercises which stimulate the converging power of the eye will serve to decrease this tendency.

Correction of the refractive error is also a most important point in the treatment of internal squint which is the result of refractive error. I cannot, however, agree with those who advocate what is termed "ample atropinization" before refraction, meaning instillation of atropine solution of appropriate strength into the eyes for three or four days before the examination. The continuous use of atropine for three or four days is attended with a certain amount of risk, which is not justified. My own experience is that paralysis of the ciliary muscle entirely sufficient for refraction can be secured with the weaker cycloplegic homatropine.

The reason why internal squints are so frequently observed in far-sighted patients is because of the relationship between the ability to converge the eye and to accommodate the strength of one's own lens. Whether the degree of farsightedness is large or small, it is necessary for the lens to be increased in strength by the ciliary muscle if clear vision is to be maintained. If, for instance, the eye is farsighted to the extent of 5 diopters, then, in order to maintain clear vision for distance, that eye must accommodate 5 diopters. With that degree of accommodation, there is an associated tendency for the eye to move inward or converge 5 meter angles. If the individual with this degree of disability desires to see at 10 inches, there must be an additional effort of accommodation to see clearly at that distance. The 4 additional diopters of accommodation required to see at this distance, instead of a normal convergence of 4 meter angles, requires a convergence of 9 meter angles. Since there is a greater physiologic desire for clear vision than for binocular vision, the farsighted individual naturally chooses clear vision. The result is clear vision in one eye, with diplopia. But since diplopia is intolerable, suppression results, followed by the development of amblyopia of some degree, and one or the other of the eyes turns inward because of the increased convergence impulses.

If glasses are properly fitted to the individual described, so that he sees clearly without the extra degree of accommodation otherwise necessary to correct his farsightedness, then normal convergence results, or should result. Squint can thus be corrected in a certain number of cases. If, however, properly fitted glasses have not produced an appreciable improvement in the internal squint within a period of one to three months, surgery is definitely indicated.

It should be emphasized that when a farsighted person with internal squint is fitted with glasses, it is almost impossible to provide him with sufficient lens power to correct the farsightedness both entirely and immediately. It is always wise, therefore, to give him as much farsighted (plus) correction as will be tolerated with comfort, while at the same time instructing the optician to furnish very thick lenses, so that, as increasing strengths of plus lens can be tolerated, the lens may be resurfaced and the patient put to a minimum of expense. If a residual squint results after the farsightedness is fully corrected, the case becomes surgical and the proper amount of surgical correction should be made.

THE MANAGEMENT OF INTERNAL SQUINTS NOT CAUSED BY REFRACTIVE ERROR

Internal squints such as strabismus fixus or traction syndromes, which are the result of structural changes in the muscles, are purely surgical so far as therapy is concerned. Non-accommodative esotropias are also almost always surgical, though many of these cases can be helped by orthoptic exercises. These exercises, however, should not be used longer than one to three months. If no benefit is apparent at the end of this time, surgery is indicated.

Innervational types of squints are almost all the result of systemic disorders, and for their correction the ophthalmologist must call upon the pediatrician, the internist and the psychiatrist. Squints which are the result of abnormal insertions of the muscles are almost always the result of over-correction or under-correction by surgery. The treatment is again surgical, the employment of some procedure to correct the original procedure.

Although the treatment of vertical deviations is no part of this presentation, it should be added that in the many cases in which, following expert surgery, a small degree of residual vertical deviation remains, correction is easily accomplished by the use of prisms base up or base down.

ORTHOPTIC TRAINING

Orthoptics is not a new branch of ophthalmology. It has been the source of many disputes among ophthalmologists, many of whom still doubt its usefulness. It has its place, however, in the nonsurgical treatment of squint.

An orthoptic diagnosis includes the various tests for binocular vision, the determination of the grades of binocular vision, retinal correspondence, and the angle and type of deviation as well as certain other factors which might prevent parallelism. All orthoptic treatment is based on forcing the patient to appreciate diplopia or double vision, which means that the true macula is being used. Many patients, with training, do come to appreciate diplopia, but not many pass beyond that stage. What then is best to do? Under these circumstances it is far better to parallel the visual axes by surgery than it is to stimulate the macula to such an extent that permanent diplopia may result.

At the present time many ingeniously contrived devices are being marketed for the correction of squints without surgery. They are advertised for orthoptic training. It must be granted that such machines, which are really nothing more than major amblyoscopes, are helpful in diagnosis, and in some instances are useful in developing the faculty of fusion. On the other hand, a word of caution concerning their use is necessary. All too often, in the hands of ophthalmologists who are something less than expert, these machines are used day after day, sometimes month after month, and sometimes year after year, to exploit the patient for the sake of the fee.

Let me quote from a personal communication from a prominent teacher, with whose opinion I heartily agree:

> I feel that from a practical standpoint, the use of orthoptics in the treatment of squint is mainly in the field of diagnosis of fusion and anomalous retinal correspondence. The theory of developing fusion is good, but a lot more research work will have to be done before it can be generally accepted as a practical routine for the treatment of squint.

This is a warning which might well be needed. Moreover, I am quite sure that certain types of vertical deviations in which these major amblyoscopes are used to exercise the eyes in a rotary manner are not only not improved but are likely to be made considerably worse.

SUMMARY AND CONCLUSIONS

1. The most important consideration in the treatment of squint, regardless of the type, is that the patient should be seen promptly.

2. Repeated measurements should be made with prisms, the vision should be checked frequently and carefully, and refraction of the eyes should also be carried out frequently.

3. Amblyopia may be treated by any

method productive of good results, but whatever method is adopted should be used cautiously and the results should be interpreted intelligently. Both the type of child and the type of family should be taken into consideration before any method of treatment is employed.

4. If exercises and orthoptic training do not produce parallelism of the visual axes, surgical intervention at the proper time is to be recommended. A trial of both measures is, however, necessary before operation is done.

5. If after operation there is a tendency for the squint to recur, exercises are useful, particularly in the external type of squint.

6. Patching or any desired type of visual training should also be continued following surgery if the indications exist.

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THE CROSSEYED CHILD—A SOCIAL AS WELL AS A MEDICAL PROBLEM*

WATSON GAILEY, M. D.†

BLOOMINGTON, ILLINOIS

The squinting child presents serious social problems for the ophthalmologist to solve. The first of them, however, concerns the parents rather than the child.

THE PROBLEM OF THE PARENTS

The parents of a squinting child practically always need to be educated concerning all the aspects of squint. They usually present themselves to the ophthalmologist with a wealth of misinformation. They are deeply concerned with the cause of the squint, which they endeavor to trace to some accident, such as a fall, or some illness, such as measles, mumps or chickenpox. The cosmetic aspects of the abnormality concern them far more than the establishment of normal vision in each eye. They are not too greatly interested in having the child fitted with glasses, even if they are found necessary. They sometimes, on the other hand, anticipate complete recovery from the wearing of glasses. Their concern is with appearance rather than with functional results. They harbor many false ideas about the surgery of squint. Some of them have been told that surgery involves something akin to enucleation, or that the eye must be fastened out on the cheek, or even that sight will be destroyed by operation. Some of them believe that if the eye is straightened, it will deviate in the opposite direction from its original position a few years after the operation; the generation of grandparents could scarcely be blamed for this fear, for it happened many times in the days when tenotomy was being done.

The most serious misconceptions which the parents of the squinting child entertain are, however, not those which I have already mentioned, but two others. The first is that unless the squint is quite pronounced and is recognizable at a considerable distance, they completely fail to realize that the psychologic problem is actually or potentially greater than the ophthalmologic problem. The second is their belief that a child with a squint should not be taken to an ophthalmologist until he reaches school age.

The first duty of the ophthalmologist, therefore, when he is consulted concerning a child with squint is to see to it that the misinformation and the erroneous concepts entertained by the parents and the grandparents are dissipated. This is not difficult, though it takes a little time and effort. They should be informed that in the great majority of cases no definite cause for a squint can be discovered. Then they should receive a lesson in anatomy, not a detailed lesson, but a simple explanation of the anatomy of the muscles of the eye. It should be particularly emphasized that the ocular muscles are inserted on the exterior of the globe, that their chief function has to do with movements of the eye, and that they have nothing to do with the internal structures of the eye, or with the sight of the eye. Finally, the parents should be informed that ocular surgery is almost painless, that the approach to it is purely scientific, that it is based on measurements and

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†Director, Gailey Eye Clinic, Bloomington, Ill.

not on guesswork, and that it will in no way damage the sight.

THE PROBLEM OF THE CHILD

The first concern of the child with squint is his appearance. He knows that he differs from his playmates in that his eyes are not parallel. He realizes his predicament, as a rule, far better than his parents realize it. He has good reason to realize it. Children, unfortunately, are cruel little animals. They take special delight in taunting their playmates and acquaintances about their physical defects. The child with a squint is likely to be the object of more derision than the spastic child.

Adults, I am inclined to believe, are fully as bad as children in this respect, and not so honest about it. The adult does not shout his taunt, as do children. The adult simply whispers—often loud enough to be heard—or points, or stares, or otherwise displays his curiosity as to the crosseyed child. This sort of thing is extremely hard for a child to bear. As I look back upon my own youth, a picture comes to mind of a big lout of a boy, neither handsome or ugly, with many big, dangling hands and feet, a boy who was extremely self-conscious, though he really had nothing to be ashamed of. And it occurs to me that if I had had crossed eyes to bear, in addition to my other difficulties at that age, I might have developed an inferiority complex from which I might never have recovered.

The child with a squint has his own ways of concealing his abnormality. He may hold his head to one side or the other. He may affect a tilted position for his head. He may keep his eyes cast down. He may avoid looking people directly in the eyes.

If the child has been called crosseyed or cockeyed or wall-eyed, he almost invariably begins to withdraw from social contacts and personality problems begin to make their appearance. This is true of almost all children, and particularly of the very sensitive child. If the parents are questioned about the child's health and behavior, they are likely to report capriciousness in eating, restless sleeping, lack of group participation, and acute nervousness. Sometimes the child disguises his ocular defect by extreme activity and even blatant exhibitionism, in an unconscious endeavor to draw the observer's attention away from the crossed eyes which are at the bottom of all his complexes. If he happens to belong to the very aggressive group of children, he may demonstrate his abilities to his comrades in other ways, often becoming destructive and actually incorrigible. He is a behavior problem in the home and at school, and often requires referral to, and complete testing in a child guidance clinic.

Crosseyed children frequently do bad work in school and do not pass their courses. If they are referred for psychologic investigation, it will be found that they often have average and better than average intelligence. Some of them are superior. Some of these children fabricate all sorts of excuses to remain out of school, because of the teasing to which they have been subjected. When they are forced to attend, their reaction—a blind desire to get even with all concerned—suggests the tactics of a sit-down striker. Many of these children, when their defects have been corrected surgically, seem totally different. Their nervousness disappears, they eat and sleep well, they identify themselves with their school groups, they do well in classes, and their behavior even approaches the normal, if there is such a thing as normal .

THE PROBLEM OF THE ADULT WITH SQUINT

The adult with a squint also is surrounded with difficulties. Many such persons, though well qualified from the standpoint of education and experience and even trained for skilled professions, are kept out of large industrial concerns because vision in one eye is so low that the risk of employing them would be too great. The industries cannot be blamed. Insurance companies refuse to issue liability insurance to firms which employ such handicapped persons. Regardless of the reason, the situation adds nothing to the self-confidence or self-respect of the adult with a squint. Many adults with squint have had the type of unhappy childhood I have described.

They confess that their entire youth was an ordeal of self-consciousness, in which they refused to participate in social activities for fear of ridicule. Many of them harbor an intense resentment against their parents, and a considerable number resent the part played in the persistence of their defects into adult life by poorly informed doctors, pediatricians and oculists.

If these adults had been treated when they were children, they could have been given amblyopic therapy, fitted with proper corrective lenses, or been subjected to surgery, and would have been spared many agonizing days. I have operated on several adults with squint who themselves earned enough money to enable the correction to be made after they had control of their own destinies. It is a gratifying thing to be able to correct a disfiguring squint in a young man or young woman in whom it has been a psychic as well as a physical disability.

THERAPY

The relief of psychic suffering among crosseyed children is a perfectly simple matter. It merely involves correction of the squint by whatever means are indicated as early in life as possible. Whenever possible, the cure should be functional as well as cosmetic before the child reaches school age.

Most children are apprehensive at the time of their first visit to the ophthalmologist, but a good working relationship is not difficult to establish. Often the child understands the problem and proves more cooperative than the parents. If the entire problem is explained to the child on his level, and if examination and treatment are carried out with his cooperation, there will be few difficulties. Letting the child participate in the procedures is often the solution of the problem, even if he does nothing more than hold the fixation target.

DISSEMINATION OF INFORMATION

The management of the child with squint is thus fairly simple. I am afraid, however, that a good deal more education is necessary among the parents of these afflicted children. They have been miserably misinformed as to how and when these children should be treated, and as to what sort of medical, optical and surgical treatment they should have. Much of the responsibility for the unintelligent advice the parents receive must be laid at the door of the general practitioner, the pediatrician, and, I am sorry to say, the untrained ophthalmologist.

I hope my listeners will forgive me if I speak quite bluntly about this matter. I have never, I believe, had the effrontery to advise parents what to do about Willie's feeding problems or his broken bones, or little Harold's hernia. If I am asked about such matters, I refer them to the family doctor or the pediatrician. I do not feel myself competent to give expert advice in such cases. Pediatricians and family doctors should refrain from advice about eye conditions and refer the patients promptly to an ophthalmologist.

I rather suspect, however, that most if not all of the confusion in the management of crosseyed children is really the responsibility of the opthalmologist, because he has failed to inform the parents, as he might readily inform them, of certain fundamental considerations, as follows:

1) There is not one spontaneous cure of squint in every hundred cases.

2) The child with a squint should be taken to a competent ophthalmologist, regardless of his age, as soon as the slightest deviation from parallelism is detected.

3) All children with squint do not require surgery. There are nonsurgical measures for correcting the defect, though they are not applicable in every case.

4) If surgery should be necessary, it is not hazardous to life or to sight.

SUMMARY

The psychic problems of children with squint are even more important than the ocular problems, which are readily managed by nonsurgical or surgical measures. Parents need education as to this condition. Ophthalmologists should make themselves responsible for the dissemination of correct information about this defect, the most important consideration being that the child should be taken to a competent ophthalmologist as soon as the slightest deviation from parallelism is detected.

THE ROLE OF RETROBULBAR NEURITIS IN THE MANAGEMENT OF SENILE CATARACTS*

SHELLEY R. GAINES, M. D.

NEW ORLEANS

With perfection of the intracapsular technic of cataract operation there has been a trend toward early operation in patients who are unable to read.

Before operating on these patients, the surgeon must be sure that the lens opacity is the cause of their decreased vision. The examining physician is apt to be misled as to the part the lens opacity is playing in obstructing vision if he depends too much on the slit lamp appearance of the cataract. All of us have seen, with the slit lamp, marked cataract formation, especially in certain congenital lens changes where the patient reads 20/20 and is not incapacitated. On the other hand, it is a common thing to observe old people with no lens changes whose vision is markedly decreased. The visual loss in many of these individuals is due to chronic retrobulbar neuritis, undoubtedly of arteriosclerotic origin.

When the cataract patient's fundus is examined with the ophthalmoscope the surgeon should automatically compare the patient's ability to see out of the eye with the examiner's ability to see into the eye. If the patient's vision is poor, but good fundus detail can be observed, other causes than cataract must account for the patient's visual symptoms.

We are particularly interested at this time in the fact that arteriosclerotic retrobulbar neuritis is present in many of these patients. Interest in arteriosclerotic cavernous atrophy has been stimulated by the studies on so-called soft glaucoma with attention centered on those cases that show cupping of the optic disc.

A. Knapp[1, 2] reports certain cases of optic atrophy with cupping and low tension where sclerosis of the basal vessels was demonstated by x-ray pictures. He thought that pressure of the sclerotic internal carotid vessels on the optic pathways might be a factor in producing the optic atrophy.

John McLean[3] reports a case of optic atrophy with cupping of the optic discs. The chiasm was explored by a neurosurgeon and sclerotic plaques were found in the internal carotid artery that pounded the optic nerves at every pulse beat. This constant trauma was thought to be a factor in bringing on the optic atrophy.

Lyle[4] presents a case in which the visual fields showed binasal hemianopsia. At autopsy the right internal carotid artery had notched the junction of the chiasm and optic nerve on its side. Lyle concludes that the pressure of the sclerotic vessels caused the field defects and the optic atrophy.

Traquair[5] states that pressure of sclerotic internal carotids might explain binasal hemianopsia.

Dandy[6] observes that sclerotic internal carotid arteries were quite often found in contact with optic nerves when the patient had no visual field loss. He concludes that pressure from sclerotic vessels is therefore not a cause of optic atrophy.

Walsh[7] states that although the etiology of soft glaucoma remains undetermined, arteriosclerosis of the cerebral vessels seems to play a part in its production.

Not all patients with arteriosclerotic optic atrophy, especially early cases, show cupping of the disc or necessarily very much pallor of the nerve head. F. Rintelen[8] believes that arteriosclerotic optic atrophy is more common in old people than is realized. He made a pathological study of 48 nerves from old individuals. His findings were: Scarred areas and rarely hemorrhagic infarcts caused by total or partial obliteration of small vessels; the necrotic foci thus caused were followed by glial or mesodermal scarring.

Arnold Lowenstein[9] studied histologically 6 eyes with profound vascular changes, most of which had been removed because of venous thrombosis. He found necrotic and cavernous patches constantly present

*Read before the Sixty-eighth Annual Meeting of the Louisiana State Medical Society, Monroe, April 14, 1948.

in the nerves, situated some distance from the lamina cribrosa. He concluded that the degenerative changes were secondary to vascular disease and impairment of nutrition.

Duke-Elder[10] states that in arteriosclerotic optic atrophy degeneration may be diffuse or patchy. Clinically, the examiner finds generalized depression of the field, sector defects, or central scotoma.

Patients with lens opacities not dense enough to explain their loss of vision deserve careful visual field studies both with the perimeter and the tangent screen.

Our findings concur with those of Duke-Elder[10] briefly quoted above. We have not found cases manifesting binasal hemianopsia. Visual loss has varied from 20/25 to 20/400. Ophthalmoscopic findings have not as a rule been dramatic. The optic discs are usually quite normal unless vision is greatly reduced, in which case pallor becomes manifest.

A patient with lens opacities and arteriosclerotic atrophy should be treated conservatively as long as it is possible to do so. When the cataract develops to such density that removal is indicated, the patient should be warned that even though his cataract operation restores peripheral vision, he may not be able to read because of the already existing disease of the optic nerve that has destroyed central vision.

CASE REPORTS

Two typical cases are reported:

Case No. 1. Mr. D. E. S., age 65, was seen on February 24, 1947. He complained of difficulty in reading. His best correctable vision was, right eye 20/70, and left eye 20/30. Definite posterior subcapsular lens changes together with cortical spokes were present in both eyes, more in the right than in the left eye. Intraocular tension was 18 millimeters of mercury with the Schiotz tonometer, right and left. The fundus could be seen in both eyes without much difficulty. The disc appeared normal; moderate arteriosclerotic changes were present. Physical examination and neurological examinations were negative except for evidences of arteriosclerosis in the larger vessels. Visual fields showed a concentric contracture of about 10 to 15 degrees (3/330 white). The 1/1000 white isopters were definitely contracted. Central scotomas were present in both eyes. When last seen on February 18, 1948, all findings were about the same including refraction and fields. Vision was correctable to 20/70 in the right eye and 20/30 in the left eye.

Case No. 2. Mrs. C. P. C., age 72, was told by an oculist she had cataracts. She complained of difficulty in reading and on her first visit brought five pair of glasses that had been changed from time to time in the last five years with no improvement in her ability to see small print. Her best correctable vision was 20/40 in each eye. The intraocular tension was 18 millimeters of mercury with the Schiotz, in both eyes. On slit lamp examination nuclear sclerosis and cortical cataracts were found in each eye. The fundus could easily be seen in either eye. Marked choroidal sclerosis was present; there were early arteriovenous crossing changes, no pallor or cupping of the optic disc could be seen. Visual field studies showed a definite central scotoma in each eye plus concentric contracture of the 3/330 white about 10 degrees from normal. One year later the fundus findings were the same and her best correctable vision was 20/30 in each eye.

CONCLUSION

Arteriosclerotic optic atrophy is the cause of failing vision in many people who have early cataracts.

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CONGENITAL EYE MUSCLE ANOMALIES*

(RETRACTION SYNDROME AND CONVERGENCE INSUFFICIENCY)

GEORGE M. HAIK, M. D.**

LOUIS A. BREFFEILH, M. D.**

NED W. HOLLAND, M. D.†

NEW ORLEANS

Ocular deviations due to extra-ocular muscle anomalies are becoming an ever increasing problem to the opthalmologist. The deviation may be so slight that it can be overcome by the desire for fusion, or may be so great that the defect is obvious. In either case the proper examination will determine the course of treatment.

The cases presented in this paper will aid in the diagnosis, and are the most common congenital defects seen. They are of a retraction syndrome and a convergence insufficiency that were present since birth. The case of convergence insufficiency appeared to become progressively worse as the child became older.

CASE NO. 1

A fourteen year old colored male was seen in the clinic in June 1947. His chief complaint was that his eyes turned out. *Present illness*: His mother had noted an abnormal turning out of one or both eyes since birth, the condition becoming more pronounced within the past six to eight years. There were no other subjective symptoms. *Past history*: The child was a full term forceps delivery. *Family history* and *review of systems* were irrelevant.

Physical examination of the patient other than the abnormality of the eyes was essentially negative. Vision was recorded as 20/40 for the right eye and 20/30 for the left eye. Externally the eyes presented a definite exotropia with an alternating type of fixation. Screen test (see figure 1) presented, in addition to the exotropia, a bilateral elevator paresis. Screening in the six cardinal positions of gaze revealed an exotropia of 45 prism diopters with a right hyperphoria of 4 prism diopters at 6 meters, and at 25 centimeters an

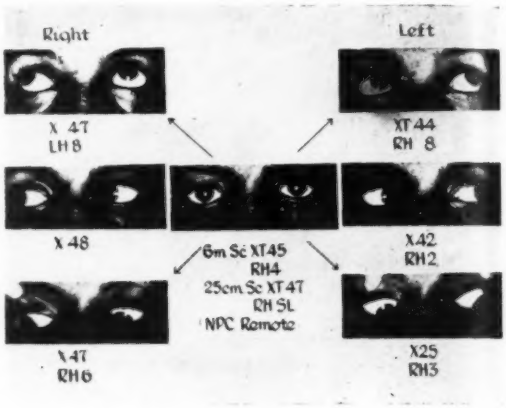

Fig. 1.

exotropia of 45 prism diopters with a right hyperphoria slight. In the positions of gaze a concomitant squint of between 44 to 48 prism diopters of exotropia was found, with a right and left hyperphoria of 8 prism diopters in the upper fields. The near point of convergence was remote. Diplopia fields were negative. The internal examination of the eye revealed no pathology. Retinoscopic under full atropine cycloplegic revealed an error in both eyes of 0.75 diopters after correction was made and checked by cycloplegic acceptance.

The patient was admitted to the hospital and under ether anesthesia both medial recti muscles were resected four millimeters. Following an uneventful recovery the patient was referred back to the clinic and subsequent examinations revealed a noticeable improvement. At the present time the screen tests (see figure 2) reveal an alternat-

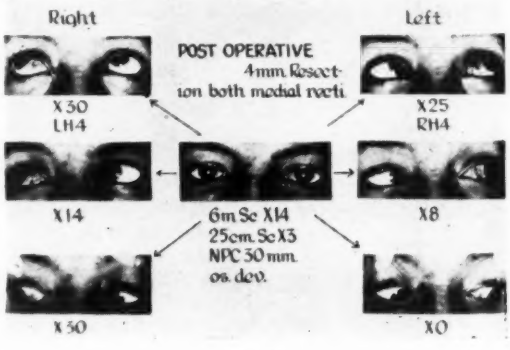

Fig. 2.

ing type of fixation and less exophoria. The near point of convergence has been reduced to 30 millimeters with the left eye deviating. The screen

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**Department of Ophthalmology, School of Medicine, Louisiana State University, and Charity Hospital of Louisiana at New Orleans.

†Resident of Charity Hospital of Louisiana at New Orleans.

findings at six meters were exophoria of 14 prism diopters and at 25 centimeters the exophoria was 3 prism diopters. Exophoria in the positions of gaze has been correspondingly reduced. The patient now presents an imbalance of the eye muscles of a moderate degree and has been greatly helped by surgical procedure.

CASE NO. 2

An eleven year old colored male was first seen in July 1947. The chief complaint was that "my right eye turns out". *Present illness*: It was learned that the patient had not been able to adduct the right eye since birth. There were no subjective symptoms and the past history, family history, and review of systems were irrelevant.

Physical examination of the patient other than the abnormality of the eyes was negative. Vision was recorded as 20/30 in the right eye and 20/20 in the left eye. Externally the right eye was seen to be turned out (see figure 3). When an attempt

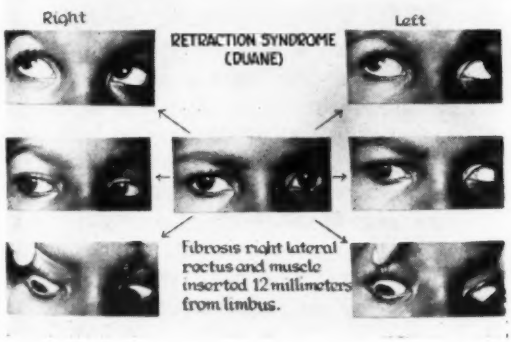

Fig. 3.

was made to look to the left, the right eye would move only to the midline. However at this time a retraction of the eye, narrowing of the palpebral fissure, and an upshoot was seen to occur. On looking to the right there was an overshoot of the medial rectus of the left eye. Internal examination of the eyes was negative for abnormal pathology.

A diagnosis of retraction syndrome was made and it was thought advisable that the lateral rectus of the right eye be explored. Under ether anesthesia both the lateral and medial recti were examined, the medial was found to be normal in appearance whereas the lateral was found to be thick and fibrotic and inserted 12 millimeters from the limbus. At this time the medial was resected four millimeters and a central tenotomy of the lateral rectus was performed. The patient made an uneventful recovery and subsequent examinations revealed no beneficial results (see figure 4).

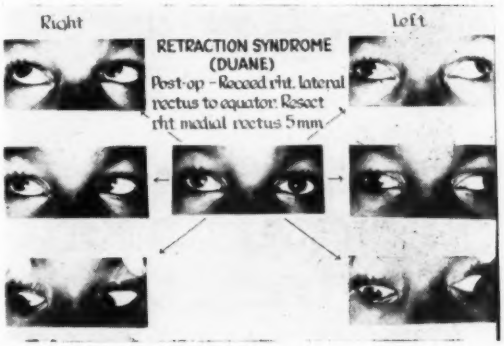

Fig. 4.

Eight weeks later again under ether anesthesia the external rectus of the right eye was receded sixteen millimeters to the equator of the limbus. At the present time, now four weeks since the last operation, there are only slight cosmetic results. The patient is unable to bring the eye to the midline and there is less abduction. All other symptoms of the retraction syndrome are present.

In contrast to the first patient the second presents a muscle imbalance of a more severe degree and one more difficult to correct. The latter case has not been surgically corrected by two operations, and the cosmetic results are not satisfactory.

DISCUSSION

For the purpose of discussion it will be better to divide the causes of squint or strabismus into three main groups: (1) Deformities of the extra-ocular muscles. (2) Deformities of innervation of the extra-ocular muscles. (3) Errors of refraction.

The muscles that are concerned with the movement of the eyes are six in number and are divided into four recti and two obliques. These muscles act on the eyeball in the following manner: (a) Elevators are superior rectus and inferior oblique; (b) depressors are the inferior rectus and the superior oblique; (c) horizontal movements are by the medial rectus which adducts the eye, and the lateral rectus which abducts the eye.

One can now study the defects in the muscles which are congenital in origin. The most common defects are the varying degrees of fibrosis of the muscle and its abnormal insertion to the eyeball. Two of the most common defects of fibrosis occur with such frequency that they have been

classified as a syndrome. The first, referrred to as Duane's syndrome or the retraction syndrome, is one in which either the medial or lateral rectus is fibrosed in varying degrees. This results in the following findings: (1) Decreased movement in the action of fibrosed muscle. (2) Retraction of eyeball in direction of action of normal muscle. (3) Limitation in action in direction of action of the normal muscle. (4) Narrowing of palpebral fissure in field of normal muscle. (5) Eye shoots up or down in field of action of normal muscle. (6) Poor near point of convergence.

The second least common condition is known as strabismus fixus and is due to fibrosis of the medial rectus, in which case the eye is fixed in, at the inner canthus, and it never moves out from this position. The fibrosis is so great that the danger of surgery on these cases is the rupture of the eyeball on attempt at removal of the muscle.

There are many other defects of abnormal attachment of the muscle to the eye and degrees of fibrosis other than the case presented, which is a Duane's or retraction syndrome, in which measurement of the insertion of the lateral rectus revealed it was 12 millimeters from the limbus instead of the usual 6.9 millimeters. This case is also very unusual as it presented a condition in that when the child looked in the field of the normal medial rectus the defective eye turned out instead of in. Upon operation a very large and fibrotic muscle of the lateral rectus was found which did not give when traction was put on the eyeball. It was considered advisable to do a central tenotomy leaving only very small bands to remain attached to the eyeball, with the desire to see if the resection of the medial would aid to stretch the fibrous connection. Since no results were obtained, the muscle was at a later stage resected to the equator and still the cosmetic results were not obtained. The final solution to the problem has as yet not been determined, but a complete tenotomy is indicated.

The second group of causes are the innervation defects. Any supranuclear lesions will affect the impulse to the nuclei and that will result in decreased impulses to the muscles. The nuclei of the nerves can be involved in diseases of the brain substance, particularly encephalitis, and the nerve can become involved in its passage through the meninges in meningitis and in the foramen in fractures of the base of the brain, and in disease processes of the bones such as Paget's. Finally, in the orbit any of the orbital diseases will involve the nerve. The most frequent nerve involvement is the abducens and it is frequently injured by trauma, especially in a blow to the side of the head as here it has the least protection.

The third and last group of causes of strabismus and the most important to the ophthalmologist are those which result from an error of refraction. These cases are first seen at about the third or fourth year of life at which time the child first begins to concentrate on close work, such as picture books. The parent will notice that the child's eye turns in only when there is an attraction close to the child and it may be one eye one time and the other eye the next time. In these cases there is usually a very great error of refraction and the error is one of hypermetropia. The mechanism behind this defect is the close association between accommodation and convergence and since the child cannot overcome the error he brings into play the extraocular muscles and this results in one eye turning in. If the condition persists over several years, the eye will remain in, or the child will alternate and the medial will become so strong that a condition of convergence excess occurs. Later the lateral muscles will become weakened by being unable to act against the medial thus the same case will be complicated by divergence insufficiency. This can all be prevented by a proper cycloplegic refraction and the prescribing of the full cycloplegic findings. Once the eye remains turned in for a long period, amblyopia will result.

Another refractive error condition which results in the eyes being turned out is seen in myopia, in which the medial muscles be-

come weak due to the lack of the accomodative power and a condition of convergence insufficiency results. If the lateral muscles continue to work over the weak medial muscles, a secondary complication of divergence excess occurs. The condition is usually seen in adults and is corrected by either prescribing convergence exercises or overcorrecting the myopia to stimulate convergence.

Other conditions which cause the eyes to deviate will not be discussed for they are numerous and time consuming. They are pathological and obstruct vision of one eye, as in cataracts, corneal scars. etc.

The minimal equipment used for examination of patients consists of a screen made from an old x-ray film, or folding of a prescription blank the long way, a small light for fixation, Maddox rod, red glass, vision chart, muscle light at 20 feet, and a set of square prisms plus the trial cases and retinoscope. The procedure consists of an essential history and a complete eye examination to rule out pathological conditions which cause defective vision. Following this, a screen test is done according to the technique presented by Dr. White and the errors in all the cardinal fields are neutralized by the use of square prisms. This includes both the horizontal and vertical defects and all is recorded. The near point of accommodation is made and recorded in millimeters. A screen Maddox rod test is made to determine the presence of retinal correspondence, whether normal or abnormal. Finally a cycloplegic refraction is made and a copy of the prescription that is worn is recorded.

Once all of the desired measurements have been made and compiled one can plan the method of attack that will be used to correct the defect. If refractive measures are indicated, then glasses are prescribed and repeated tests are made to determine the remaining errors. Orthoptic measures may be indicated. These also are started and should surgery be indicated the amount of the surgery to be done and the muscle to be operated upon are figured prior to the time that the patient goes to surgery. Without expensive orthoptic machines one can obtain the desired effect by the use of a prism bar of Berens for convergence and divergent exercises.

The first case represents the more common type of strabismus seen and is a concomitant case of convergence insufficiency which was partially corrected by medial surgery. In this case the near point of convergence was distant and had to be brought in to obtain the desired results, consequently medial surgery was indicated.

In conclusion it can be said that the diagnosis of strabismus can be made with the minimum of equipment and treatment may be satisfactorily carried out. A proper diagnosis is essential to satisfactory results and only by the scientific approach may progress be made in the surgical correction of motor muscle anomalies.

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SPONTANEOUS PNEUMOTHORAX AND MEDIASTINAL EMPHYSEMA

The occurrence of spontaneous pneumothorax or mediastinal emphysema always brings acute concern. The patient is startled by pain and beset with fear; the physician has immediate occasion to consider the uncertainties of its course and the physical methods of relief. The two conditions are different in their clinical manifestations but related in development.

Spontaneous pneumothorax as a clinical entity has been known over an indefinite time. Methods of diagnosis now available have changed it from a rarity to a condition of comparative frequency. Schneider and Reissman reported an incidence of 1 in 500 of armed service selectees, age 18 to 33. Heath reported 10 cases in 28,000 admissions to A.A.F. Regional Hospital, Lincoln, Nebraska.

Concepts of the etiology of the condition have changed in the past twenty years. It was formerly accepted that the majority of cases were tuberculous in origin. Now it is felt that the incidence of tuberculosis is 10 per cent or less, and that its presence has little bearing on the development of the pneumothorax. Theories as to the mechanism of the production of the pneumothorax are several. The condition is rarely fatal and few necropsy reports are available. On the one hand, the thought is presented that an emphysematous bleb, or "valve vesicle," is so situated that air enters and cannot leave. Another projected cause is a rent in the visceral pleura due to the pull of adhesions. A third cause is the rupture into the pleura of congenital pulmonary cysts. It is probable that all three factors have a bearing on the problem, and with them is a fourth which is related to the occurrence of spontaneous mediastinal emphysema, and subsequently, to the production of spontaneous pneumothorax.

The existence of emphysema in the mediastinum has been known for more than a century as consequent upon trauma, or secondary to serious respiratory disease. In 1934, Hamman first called attention to the spontaneous occurrence of this condition. He described mediastinal emphysema as characterized by sudden pain in the chest, which possibly might radiate to the upper midback, shoulders, neck, and occasionally down the left arm. There may also be pain on deep breathing, swallowing, or movement of the head. The duration may be hours or several days. The character of the symptoms may lead to an erroneous diagnosis of coronary occlusion. The presence of air in the tissue of the anterior chest wall or neck is diagnostic. The pathognomonic sign is a peculiar crunching sound heard over the precordium and synchronous with the heart beat. This was attributed

by Hamman to the action by the heart on the air between the pericardium and the sternum. Roentgenographic demonstration of air in the mediastinum is also diagnostic. In the general diagnosis, coronary occlusion, pericarditis, dissecting aneurism, pleurisy, and pulmonary embolus must be considered.

In studying the condition of mediastinal emphysema, Hamman observed that in trauma to one side of the chest pneumothorax may occur on the opposite; that in children with pneumonia, mediastinal, and possibly, subcutaneous emphysema, often occurs; that subcutaneous emphysema and pneumothorax may occur in asthma. He advanced the opinion that air from spontaneously ruptured alveoli would travel along the interstitial bands to the mediastinum, and then to the thin parietal pleura and into the pleural cavity when a bleb ruptures.

Hamman pointed to experimental and clinical support of this theory. Macklin inflated the lungs of cats and produced interstitial emphysema, but no rents in the visceral pleura developed. Spontaneous pneumothorax occurred in 2 of Hamman's 7 cases of spontaneous mediastinal emphysema. Since these observations, others have reported numerous cases of the two conditions existing together.

Miller reported 4 cases of spontaneous mediastinal emphysema, and in 2 of these spontaneous pneumothorax was demonstrated. Schwartz *et al* reported 6 cases with the two conditions. Dickie reported 6 cases of spontaneous pneumothorax without mediastinal air, 7 individuals with mediastinal air and without pneumothorax, and 7 with a combination of the two conditions.

This conception of the production of pneumothorax explains the occasional instances in which spontaneous pneumothorax on one side is followed within a few hours by the same condition on the other side.

Alternating spontaneous pneumothorax has been studied by Cooch, who collected reports of 44 cases and added 1 of his own. Cases under consideration were those in which pneumothorax occurred on different sides on one or more occasions a month or more apart. One case was found to have tuberculosis three years later and none of the remaining 44 was believed to have this disease at the time of the pneumothorax. The number of attacks of pneumothorax varied from two to twenty. The severity of attacks varied between cases and among different attacks in the same individual.

The variable picture immediately following the attack and the unpredictable course suggest that in those instances in which the rupture of a valve vesicle is peripheral, tamponade of the lung may result, and that in other cases in which the initial emphysema is interstitial and subsequently reaches the pleura by the mediastinal route, the retraction of the lung closes the interstitial ruptured alveolus before tension develops.

The treatment of this condition varies with the severity. The majority of patients should be in bed until the air begins to disappear, even though they are symptom free. The severe cases require aspiration of the air under tension. When this beneficial effect is only transitory, there should be air drainage. This is accomplished by fixing a needle or catheter in the chest wall communicating with the pleura, and attaching to it a rubber tube leading under water 3 feet below. An oxygen tent may be necessary. With such arrangements, severe bilateral cases can be supported successfully.

ORGANIZATION SECTION

The Executive Committee dedicates this section to the members of the Louisiana State Medical Society, feeling that a proper discussion of salient issues will contribute to the understanding and fortification of our Society.

An informed profession should be a wise one.

AMA ASSESSMENT

At the Interim Meeting of the American Medical Association, recently held in St. Louis, considerable time was devoted to discussion of plans for future activity in regard to a unified fight against all bills and other threats which will result in compulsory health measures for the citizens of this country. It is felt by the leaders of organized medicine, as expressed by delegates to this meeting, that concentrated effort is needed in this fight and that there must be obtained the interest, cooperation and assistance of every physician in these United States. During the past several years there has been maintained in Washington an office, operated by representatives of the AMA, for the purpose of keeping in close contact with all matters of interest to the profession; giving support to appropriate congressional matters and offering immediate and powerful opposition to all phases of legislation which would be detrimental to the American public and would tend to take away from the medical profession freedom to treat their patients in the manner which they feel is most beneficial and adequate for them. This office has been a great asset in these endeavors, however due to the evident increased activity on the part of the present administration which, from all indications, quite highly favors federalization of the practice of medicine, it is the consensus of the Board of Trustees of the AMA that expansion of efforts of organized medicine is acutely needed at this time.

In line with such feeling it was agreed at this Interim Meeting that every member of the AMA is no doubt vitally interested in these plans and therefore desirous of participating in this fight. An undivided profession is the greatest asset for which we can hope at this crucial time and it is felt that all members who will give thought to this subject will agree with this principle. The AMA has levied an assessment of $25.00 on each member of the Association and has asked that the state medical societies assist in collection of this amount. In December the president of the Louisiana State Medical Society addressed a letter to every member of this Society in which he asked cooperation and support in this endeavor. In the same communication was included a notice from the secretary-treasurer requesting that payment be remitted to secretaries of the various component societies who would in turn transmit this to the office of the Society. Up to date there have been received checks from a good percentage of the members, however there are many more who should give this important subject their immediate attention. It is desired that Louisiana be outstanding in this combined fight against the hazard which is threatened. If the government assumes control of the practice of medicine it is felt that our country, our state, our city, and our parishes will be denied the maximum medical care which the individual physician is able to render and has rendered to the citizens of this nation. To take the practice of medicine away from the individual doctor will certainly not work to the advantage of the general public. The personal relationship between the doctor and patient, which is the solid foundation of medical practice, will be destroyed. There is nothing more satisfying to a patient, no matter what the physical condition, than to know that he enjoys the confidence and interest of his attending physician. All of the doctors in Louisiana are urged to send in their remittance for this assessment promptly in order that these objectives may be maintained. Do not object to the assessment—this is the first ever levied by the American Medical Association. If it is not paid it may be the last opportunity for contri-

bution—the government may take over and force a higher assessment on all citizens—including the physicians.

In addition to payment of the assessment, which is of paramount importance at this time, the following suggestions for activity in opposing federalization of medicine are offered by the president of the State Society

1. Talk to your patients, asking them to express their opposition in writing to their congressmen.

2. Talk to civic and business leaders whenever and wherever possible, getting them to do likewise.

3. Talk before, and in all other ways, influence clubs, unions, and other organizations to likewise protest.

4. Personally call upon your congressman or by letter express to him your opposition and the reasons therefor.

5. Support wholeheartedly your local, state, and national medical societies in their effort to combat such legislation. Funds will be needed which you should supply unhesitatingly, feeling that every dollar you can spare in the fight against such legislation will pay you and your children dividends for years to come.

Again, may it be emphasized that the cooperation and interest of every member of the Louisiana State Medical Society is needed and earnestly solicited.

—o—

LOUISIANA STATE MEDICAL SOCIETY NEWS

CALENDAR

PARISH AND DISTRICT MEDICAL SOCIETY MEETINGS

Society	Date	Place
East Baton Rouge	Second Wednesday of every month	Baton Rouge
Morehouse	Second Tuesday of every month	Bastrop
Natchitoches	Second Tuesday of every month	
Orleans	Second Monday of every month	New Orleans
Ouachita	First Thursday of every month	Monroe
Rapides	First Monday of every month	Alexandria
Sabine	First Wednesday of every month	
Second District	Third Thursday of every month	
Shreveport	First Tuesday of every month	Shreveport
Vernon	First Thursday of every month	

SECOND ANNUAL FOUNDER'S DAY FORUM OF THE RAPIDES PARISH AND EIGHTH DISTRICT MEDICAL SOCIETIES

Tribute to the physician and his life's work was paid by Bishop Charles P. Greco of Alexandria, Louisiana, in the principal address at the annual Founder's Day banquet of the Rapides Parish and Eighth District Medical Societies at Hotel Bentley, January 15, 1949.

The banquet climaxed the day-long Founder's Day Forum at which scientific papers were presented by eminent professors and physicians from Louisiana State University and Tulane Medical Schools, New Orleans, Louisiana. The speakers for the day were:

Julius W. Davenport, M. D.,
Willard R. Wirth, M.D.
Carl N. Wahl, M.D.
Curtis H. Tyrone, M.D.
W. R. Akenhead, M.D.
Samuel A. Romano, M.D.
E. Perry Thomas, M.D.
J. K. Howles, M.D.
A. Scott Hamilton, M.D.

Dr. Richard E. C. Miller was installed as president, succeeding Dr. James A. White. Other officers installed were: Dr. E. C. Uhrich, first vice-president; Dr. Morris J. Hair, second vice-president; Dr. Henry Q. Gahagan, secretary-treasurer and Dr. H. H. Hardy, delegate.

Dr. Charles O. Horton of Franklin, selected as the oustanding general practitioner for Louisiana and the third outstanding practitioner from the United States by the A.M.A., and Dr. M. D. Hargrove and Dr. P. T. Talbot, president and secretary-treasurer, respectively, of the Louisiana State Medical Society, were among speakers who addressed the gathering of more than 200 doctors, their wives and guests. Presenting Dr. Horton, Dr. King Rand of Alexandria spoke of him as a man who "has devoted his life to the medical care of his neighbors."

SECOND DISTRICT MEDICAL SOCIETY

The regular meeting of the Second District

Medical Society was held on January 20, Dr. Joel Gray, president, presiding.

Under the auspices of the Council of Medical Service and Public Relations, Dr. Marjorie Shearon of Washington, D. C., gave a talk on socialized medicine. She warned the members of the Society of the impending danger of the passage of legislation extending the social security act. A resolution opposing any form of national compulsory medical care insurance was passed unanimously by the Society and copies of the resolution were sent to the Senators and Representatives of Louisiana asking their co-operation in this matter.

ORLEANS CHAPTER OF THE AMERICAN ACADEMY OF GENERAL PRACTICE

The Orleans Chapter of the American Academy of General Practice held its regular monthly meeting on November 29, 1948, at the Lenfant's Boulevard Room. An excellent dinner was served to those attending.

Dr. H. S. Mayerson, Professor of Physiology at Tulane University, presented a very interesting talk on Physiology of Hypertension and on the functions and relation of the thyroid gland to the other endocrine glands. The presentation was followed by a round table discussion on hypertension and the newer methods of treatment of Graves' disease.

Several similar dinner meetings and round table discussions are planned for future meetings.

THE AMERICAN ACADEMY OF ALLERGY

The American Academy of Allergy, in co-operation with the University of Georgia, will sponsor an orientation course in allergy from March 7 through March 11, 1949, at the University Medical School in Augusta, Georgia. This course is under the direction of Dr. Leo H. Criep, assisted by other Fellows of the American Academy of Allergy, and a distinguished faculty.

The course is intended for internists and general practitioners, dermatologists, rhinologists and otolaryngologists. The course will include lectures and clinical demonstrations on allergens, hay fever, bronchial asthma, diagnosis and treatment; diagnosis, etiology, pathology and immunology of allergy, allergic rhinitis, atopic dermatitis and other significant manifestations in the field.

Enrollment is open to anyone. The fee is fifty dollars. Applications and inquiries should be addressed to the Executive Office of The Academy, 208 East Wisconsin Avenue, Milwaukee 2, Wisconsin.

INTERNATIONAL AND FOURTH AMERICAN CONGRESS ON OBSTETRICS AND GYNECOLOGY

The International and Fourth American Congress on Obstetrics and Gynecology will be held on May 14-19, 1950, at the Hotel Statler in New York City. A preliminary scientific program has been planned to include the topics of (1) physiology of human reproduction, (2) the pathology of human reproduction, (3) social and economic problems, (4) neoplastic diseases of the female reproductive system and (5) obstetric and gynecologic procedures. There will be meetings of various groups represented at the Congress, including nurses, nurse midwives, hospital administrators, educators, practicing physicians, investigators in special fields and public health doctors and nurses.

The technical exhibit at the Congress is under the direction of a special committee of which Dr. Woodard D. Beacham of New Orleans is chairman. Dr. John Parks of Washington, D. C., heads the committee in charge of the scientific exhibit. The committee in charge of arranging the motion picture program is under the direction of Dr. Archibald D. Campbell of Montreal.

Inquiries pertaining to the Congress should be addressed to the Chairman of the International and Fourth American Congress on Obstetrics and Gynecology, Dr. Fred L. Adair, at 24 West Ohio St., Chicago 10, Ill.

AMERICAN BOARD FOR CERTIFICATION OF THE PROSTHETIC & ORTHOPEDIC APPLIANCE INDUSTRY, INC.

To improve the professional standards of manufacturers of artificial limbs and braces, and the fitters employed by such firms, an American Board of Certification has been established with headquarters at 336 Washington Bldg., Washington, D. C.

Three orthopedic surgeons and four leaders in the orthopedic appliance industry constitute the national board which will grant certification. The orthopedic surgeons are Dr. Rufus Alldredge, New Orleans, La.; Dr. Henry H. Kessler, Newark, N. J.; and Dr. Atha Thomas, Denver, Colo. Lay members of the board are Chester C. Haddan, Denver, Colo.; Lee J. Fawver, Kansas City, Mo.; J. B. Korrady, Chicago, Ill.; and David E. Stolpe, New York, N. Y. Mr. Haddan is president and Glenn E. Jackson is executive director.

"To be qualified for certification," said Mr. Haddan, "an applicant must prove that he has had at least four years of actual experience under proper supervision or two years of special training and one year of experience. In addition, the applicant must present the signatures of two physicians who state that he meets various other requirements. More than 100 firms and 200 fitters have already applied for certification.

"The medical profession has been of invaluable assistance during the two years of intensive work which has finally resulted in the incorporation of the American Board of Certification of the Prosthetic & Orthopedic Appliance Industry."

POSTGRADUATE CENTER FOR PSYCHOTHERAPY, INC.

The Postgraduate Center for Psychotherapy, Inc., the training associate of the Institute for Re-

search in Psychotherapy, Inc., has been granted a provisional charter from the Board of Regents of the New York State Educational Department. It offers intensive training for psychiatrists in psychotherapy leading to certification; also individual courses for general practitioners and non-psychiatric medical specialists in psychotherapy and psychomatic medicine.

Clinical psychologists and psychiatric case workers are trained in methods that are within the scope of their education and skills, and which can contribute to an integrated program.

The primary aim of the program is to encourage the development of teams of psychiatrists, psychologists, and social workers who can organize and operate community psychiatric clinics.

The courses of instruction include practical demonstrations in psychotherapy as well as lectures. The work of all students is supervised by teachers qualified to manage a specific type of problem. Before the psychiatric student completes his training, he has had personal experience under supervision in the management of various types of cases.

There are required and optional lecture courses. Courses include the principles and practice of psychotherapy; psychodynamics and psychopathology; short-term psychotherapy utilizing psychobiological and psychoanalytical approaches; hypnotherapy; narcosynthesis; shock therapy; group therapy; case work therapy; psychological counseling; child and adolescent psychotherapy; case conferences and seminars; organization and operation of a community psychiatric clinic; projective techniques in psychotherapy; seminar or psychosomatic medicine; therapy of the neuroses and psychoses; compensation and medicolegal problems in psychiatry; anthropological and sociological aspects of psychiatry; and industrial psychiatry.

Therapeutic Program: The Institute, in close cooperation with the Postgraduate Center, also will carry out a therapeutic program. This contemplated activity will consist of the extension of clinic services for those who are in need of psychiatric treatment and are unable to afford the fees of private psychiatrists.

Research: A research program is in process to study and to evaluate all existing types of psychotherapy in order to determine their values and limitations, the kinds of patients benefitted, and the extent and quality of the successes achieved. The aim is to shorten treatment methods and to render them more efficient.

Public Educational Program: The educational program is conducted in several channels; for the lay public, the general practitioner, the specialist in other branches of medicine, and the psychiatrist. It is coordinated with the activities of existing agencies which are working in the same field.

Further information on this program may be obtained by writing to Stephen P. Jewett, M.D., Dean, or to Miss Janice Hatcher, Registrar, Postgraduate Center for Psychotherapy, Inc., 218 East 70th Street, New York 21, New York.

MEDICAL AND SURGICAL SUPPLIES DESPERATELY NEEDED IN WAR-DEVASTATED AREAS

Continued aid in the form of medical and surgical supplies from America is needed to prevent widespread suffering and death among the peoples of war-devastated areas throughout the world. The members of our profession can help provide such aid through the Medical and Surgical Relief Committee, Inc.

During the past seven years, with little publicity and modest financial support, this Committee has provided more than a million dollars worth of desperately needed medical, surgical and dental supplies and publications to stricken areas overseas. These materials are sent to hospitals, physicians and dispensaries giving *free* medical care to the needy.

Any article or material, routinely used in office or hospiatl practice, is needed, and the most pressing need of all is for recent medical, surgical and dental textbooks and journals. Please forward any such supplies which you and your hospital can donate to this great need to:

The Medical and Surgical Relief Committee, Inc.,
Room 328—420 Lexington Avenue,
New York 17, New York.

Dr. Allen O. Whipple, of New York City, is Chairman of the Medical Advisory Council, Admiral W. F. Halsey is President of the Board of Directors and Mr. Edward R. Stettinius, Jr., is Chairman of the Board.

DOCTOR WANTED FOR ARKANSAS COUNTY

The Methodist Church is looking for a physician to settle and serve in Newton County, rural northwestern Arkansas, where 10,000 are without a doctor or nurse, and the nearest hospital is twenty-five miles from Jasper, the county seat.

Five years ago the Methodist Church organized the "Newton County Larger Parish", built a stone church in Jasper, and now has two experienced pastors carrying on a program of evangelism, religious education, and community service. The ministers cooperate with the agricultural agent and others in economic betterment, have a farmer's cooperative, etc.

If a doctor can be found for the community, the Methodist Church will organize community support for the erection of a clinic, with a laboratory and a few beds, and will subsidize the establishment until the practice is built up. The doctor will reside in Jasper, will be related to public health and school health, and the state will probably supply a nurse.

For further information, write to Dr. M. O. Williams, Board of Missions and Church Extension, 150 Fifth Avenue, New York 11, N. Y. This is one of a large number of calls Dr. Williams has

for physicians and nurses in the United States or abroad—some of them as missionaries, some, as above, as private practitioners.

NEW OFFICERS OF COMPONENT SOCIETIES

The following officers have been elected by their respective parish societies to serve for 1949:

Evangeline Parish Medical Society
President—Dr. Robert B. Thompson, Ville Platte
Vice-Pres.—Dr. Gordon E. Soileau, Ville Platte
Sec.-Treas.—Dr. Reed A. Fontenot, Ville Platte

Lafayette Parish Medical Society
President—Dr. W. Melancon, Carencro
Vice-Pres.—Dr. Donald B. Williams, Lafayette
Sec.-Treas.—Dr. Edgar P. Breaux, Lafayette
Delegates—Dr. L. O. Clark, Lafayette, Dr. Robert Kapsinow, Lafayette
Alternates—Dr. George Gardiner, Lafayette, Dr. Donald B. Williams, Lafayette

Natchitoches Parish Medical Society
President—Dr. Joseph Bath, Natchitoches
Vice-Pres.—Dr. E. Preston Ferguson, Natchitoches
Sec.-Treas.—Dr. James V. Kaufman, Natchitoches

Pointe Coupee Parish Medical Society
President—Dr. F. F. Rougon, New Roads
Vice-Pres.—Dr. J. M. Mosely, New Roads
Sec.-Treas.—Dr. Anna Plauche, Morganza
Delegate—Dr. J. C. Roberts, New Roads
Alternate—Dr. F. F. Rougon, New Roads

Washington Parish Medical Society
President—Dr. Frederic Foster, Bogalusa
Vice-Pres.—Dr. H. L. Morgan, Bogalusa
Sec.-Treas.—Dr. Clifford W. Crain, Bogalusa
Delegate—Dr. R. R. Ward, Bogalusa

Second District Medical Society
President—Dr. Joel B. Gray, New Orleans
Vice-Pres.—Dr. Wm. K. Gauthier, Metairie
Sec.-Treas.—Dr. Adrian B. Cairns, New Orleans
Delegate—Dr. Joel B. Gray, New Orleans
Alternate—Dr. Adrian B. Cairns, New Orleans

EDITH LOEBER BALLARD
1875-1948

Dr. Edith Loeber Ballard, member of the Orleans Parish Medical Society, died at Bay St. Louis, Miss., on December 23, 1948. Dr. Ballard was an active member of the State Society since 1914. She was a graduate of Cornell Medical School in 1905.

CHARLES WILLIAMS LEWIS
1896-1949

The St. Landry Parish Medical Society has reported the death of Dr. Charles Williams Lewis on January 6, 1949. Dr. Lewis was a graduate of Tulane Medical School, Class of 1918. He lived and practiced in Eunice, La. Dr. Lewis maintained membership in the State Society since 1921 and served as secretary-treasurer of his parish society in 1938 and as its president in 1940 and 1941.

FRANK RAYMOND GOMILA
1887-1949

Dr. Frank Raymond Gomila died on January 22, 1949. He was a member of the Orleans Parish Medical Society and a member of the State Society since 1914. Dr. Gomila resided in New Orleans. He was a graduate of Tulane Medical School, Class of 1908.

GEORGE H. UPTON
1882-1949

The death of Dr. George H. Upton on January 30 has been reported by the Orleans Parish Medical Society. Dr. Upton was an active member of the State Society since 1914. He was a graduate of the Tulane Medical School in 1907.

WOMAN'S AUXILIARY TO THE LOUISIANA STATE MEDICAL SOCIETY

WOMAN'S AUXILIARY

The Woman's Auxiliary to the Orleans Parish Medical Society entertained at their annual reception and program in January at the Orleans Club. The guest of honor and speaker at the event was Dr. J. Kelly Stone, president of the Orleans Parish Medical Society. Mrs. Anees Mogabgab, past president, and Mrs. Boni DeLaureal, president-elect, presided at the tea table.

Progress made in the field of the Rural Health Programs was discussed by Mrs. M. C. Wiginton, of Hammond, at the regular January meeeting of the Woman's Auxiliary to the East Baton Rouge Parish Medical Society. Mrs. Carl Roy Young, Covington, a past State Auxiliary President, was also a guest. Mrs. John Ray Powers, president, conducted the meeting.

Members of the Woman's Auxiliary to the Calcasieu Parish Medical Society heard Dr. Walter Moss speak on "Types and Plans for Hospitalization." Miss Frances Moak, librarian of the Charity Hospital School of Nursing, gave an interesting talk on "Nursing as a Career" to the Woman's Auxiliary to the Tangipahoa Medical Society with Mrs. Marshall Scarle, president, conducting the meeting. The Woman's Auxiliary to the Ouachita Parish Medical Society held its annual luncheon in December on the Virginia Roof. At this time the Auxiliary and its guests had the privilege of hearing the famed Ouachita Parish Ensemble. The

president, Mrs. A. Scott Hamilton, presided over the luncheon tables.

"School Health Program" is the title of an article in the December issue of the Bulletin, page 129, by Fred V. Hein, Ph. D., Consultant in Physical Fitness of the A. M. A. "Interest in the school health programs has spread throughout the country like an epidemic during the past few years. This program touches the medical profession profoundly. It reaches into the local health department when there is one. It involves the parents and the voluntary health agencies that exist in the community and, foremost, it involves the children themselves, so that all need to be brought into the picture and given a full share in developing the program.

"Certainly I can think of no more fruitful long-term public relations than those which would come out of your participation and the participation of the medical profession in the school health program. The youngsters in school are in the formative stages of development when attitudes toward doctors, towards medical care and towards health in general are being formed.

"Logically, we divide the school health program into three phases. The first we label as health instruction. The second aspect is the health service phase and that is where the doctor comes into the picture most prominently. Health services do not include treatment. They do however include a program for the control of communicable diseases, periodic medical examinations either at the school or at the office and still another phase of health services are screening tests for the detection of visual and hearing defects which can be done by nurses or the teachers themselves. The following program to secure correction of remediable defects through the family and its doctor is also an important part of health services.

"The third aspect of the over-all program is that of healthful living. This means measures that are taken to make the physical environment sanitary and safe as well as to provide a healthful mental and emotional environment."

In the January issue of NEWS AND VIEWS will be found a complete plan of organization of Health Councils for the improvement of School Health Services.

MRS. F. U. DARBY,
Press and Publicity Chairman.

LOUISIANA BRANCH AMERICAN ACADEMY OF GENERAL PRACTITIONERS

The Woman's Auxiliary to the American Academy of General Practitioners extends a cordial invitation to the wives of all members of the A. A. G. P. to join the Auxiliary in time to participate in the activities of the convention meeting to be held in New Orleans May 7 and 8. The privilege of charter membership is being extended for a limited time to those who were not able to be present at the organizational meeting held last April in Alexandria. The Louisiana group of women hold the honor of being the first in the country to form an auxiliary to the A. A. G. P.

Further details of convention plans and announcement of the program will be made in subsequent issues of the Journal. It may be possible to arrange a patio party on Saturday afternoon to precede the business meeting on Sunday morning. Mrs. George D. Feldner, general chairman of the convention, Mrs. Esmond Fatter, secretary-treasurer of the group, and Mrs. Edwin R. Guidry, councilor of the New Orleans District will be available for conference with New Orleans women who are interested in being associated with an organization that is of prime importance to the professional careers of their husbands.

MAZIE ADKENS GUIDRY,
Publicity Chairman.

BOOK REVIEWS

Hernia: By Leigh F. Watson, M. D., F. I. C. S., St. Louis, The C. V. Mosby Company, 1948, 3d ed. Pp. 732. Illus. Price, $13.50.

Although this third edition of Watson's book on Hernia, which has been "enlarged and revised" contains a mass of anatomical data and a large number of references on hernia, it is remarkable that it should have gone to press with so many statements and recommendations which are at variance with generally accepted principles and current thoughts concerning the management of patients with hernia. For example, the author states that he believes the injection treatment is much safer for the elderly patient, provided the hernia is suited to this method, based on his fifteen years' experience with the injection treatment.

Many experienced surgeons would take exception to the author's recommendation of the jackknife position for hernia patients after operation, feeling that this position predisposes to the occurrence of phlebothrombosis in the lower extremities and interferes with the patient moving about freely in bed.

It is surprising that the local use of sulfanilamide in hernia operations is condoned, even though justification for such a practice is limited to cases in which the wound is already infected.

The author's advice that postoperative catheterization should be done only as a last resort because of the danger of cystitis is certainly not in keeping with the thought of many authorities concerning this matter.

A favorable feature of the book is that in the

chapter on "Operations for Inguinal Hernia", the Cooper's ligament operation is presented first, thus reflecting the current trend toward the adoption of this type of operation as the standard operation for inguinal hernia. In discussing the problem of recurrent hernia the author again draws attention to the fact that recurrent indirect inguinal hernia is usually most satisfactorily repaired by the Cooper's ligament operation, reinforced with a fascia flap from the rectus sheath.

AMBROSE H. STORCK, M. D.

Lives of Master Surgeons: By Richard A. Leonardo, M. D., Ch. M., F. I. C. S. New York, N. Y., Froben Press, Inc., 1948. Pp. 469.

From the prolific pen of Dr. Richard A. Leonardo have come eight volumes in a six year period. "Lives of Master Surgeons" is a dictionary-styled reference designed as a supplement to the author's "History of Surgery" (1943), which earlier book includes numerous illustrations and a lengthy bibliography, source material for both works.

Dedicated to the famous Hungarian surgeon, Dr. Eugent (Jenö) Pólya, the record is one of brief, factual accounts of other master surgeons from various historic periods and nationalities. New Orleans medical men will recall the visit in 1939 of Dr. Pólya, "officially declared dead in 1944 . . . a victim of Nazi madness," to quote Dr. Leonardo's words. From Aesculapius to Yperman, the list is alphabetically arranged and includes data of surgeons who are not living; among these are Samuel M. D. Clark, Charles Jefferson Miller, Frederick W. Parham, Edmond Souchon, and Warren Stone.

The lack of an index to the volume and the absence of some outstanding "lives" are omissions to be regretted in what otherwise is a handy reference for students and libraries.

VERA MOREL.

Synopsis of Pediatrics: By John Zahorsky, St. Louis, C. V. Mosby Company, 1948, 5th ed. Pp. 449, 158 illus. Price, $5.50.

This handbook will undoubtedly continue to have great appeal to practitioners in that the new edition again stresses therapeutic procedures found to be useful at the home and office in the daily work of the pediatrician. Relatively few changes have been made in content or form since the fourth edition; most of these were probably considered necessary because of recent advances in therapy. Unfortunately, perhaps incident to delays in printing as well as to the rapid current strides in the development and use of antibiotics, the book is not up to date in this regard. There are still a number of empiricisms that might conceivably have been justified for the sake of brevity, if not by current research and teaching in pediatrics.

Though this reviewer cannot conscientiously recommend this work for undergraduate medical students, there is little doubt that it will continue to be useful occasionally as a handy source of reference for many busy practitioners.

R. V. PLATOU, M. D.

Your Baby: Complete Baby Book for Mothers and Fathers: By Gladys Denny Shultz and Lee Forrest Hill, M. D., Garden City, N. Y., Doubleday & Company, Inc., 1948. Pp. 278, illus. Price, $3.50.

This is the most comprehensive and easily readable book of its sort that the reviewer has come across, and covers everything from conception through the preschool age that a mother and a father will need to know in order to help their baby get a good foundation in life. It answers many questions of both parents that the pediatrician will overlook in his busy routine. The reviewer considers it the perfect solution to the question of both parents: "What book should we have to guide us in our care of our baby?"

SUZANNE SCHAEFER, M. D.

Trichomonas Vaginalis and Trichomoniasis: By Ray E. Trussell, M. D., Springfield, Ill., Charles C. Thomas, 1947. Pp. 277. Price, $6.00.

This is a comprehensive review of the literature with a bibliography of 1586 references.

The growth and reproductive requirements of the parasite are adequately presented with concise evaluations of the innumerable methods of treatment. The painstaking approach to the problem should enhance the possibilities of specific therapy which is at yet unknown.

To those interested in the further study of the trichomonads, this book is indispensable.

EUGENE H. COUNTISS, M. D.

PUBLICATIONS RECEIVED

Caduceus Press, Ann Arbor, Mich.: Essentials of Gynecologic Endocrinology, by Gardner M. Riley, Ph. D.

Grune & Stratton, Inc., New York: Shock and Allied Forms of Failure of the Circulation, by H. A. Davis, M. D., C. M., F. A. C. S.

The C. V. Mosby Company, St. Louis: Cancer of the Esophagus and Gastric Cardia, edited by George T. Pack, B. S., M. D.

Oxford University Press, Inc., New York: Reprints of 21 articles published as supplement to the Oxford Loose-Leaf Medicine.

W. B. Saunders Company, Philadelphia: Obstetric Analgesia and Anesthesia, by Franklin F. Snyder, M. D. Mayo Clinic Diet Manual, by The Committee on Dietetics of the Mayo Clinic. Blood Transfusion, by Elmer L. DeGowin, M. D., Robert C. Hardin, M. D., and John B. Alsever, M. D. Clinical Aspects and Treatment of Surgical Infections, by Frank Lamont Meleney, M. D., F. A. C. S. The Business Side of Medical Practice, by Theodore Wiprud.